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Reg. no. 1999/007722/06

Dear Sirs

**Re: Submission in Response to Data Services Market Inquiry**

Cell C Limited (Cell C) welcomes the Competition Commission's (CC) initiative in undertaking a market inquiry into this important sector. The Call for Submissions dated 20 September 2017 lists a number of themes and questions that the CC considers important to investigate further. It is our understanding that there will be further engagements with companies like Cell C, and given the detailed and complex nature of the data required, Cell C would like to focus this submission on the main issues which we see as hampering competition in the data market. Cell C was a late entrant into the mobile network operator (MNO) market, having entered seven years later than the incumbents (Vodacom Pty Ltd and MTN Pty Ltd). Cell C can therefore provide the CC with a valuable overview of the issues that affect the market from the perspective of an operator without market power.

Cell C is happy to provide the more detailed data that the CC may need, and is also available for a meeting to explain its position and its data.

We understand that the main purpose of the inquiry is to understand what factors or features of the electronic communications market(s) and value chain may cause high data prices. In our view, there are numerous market failures in related markets that all contribute to high data prices in South Africa. These correspond to a large degree with the assessment factors listed by the CC under point 4 of the 'Call for Submissions'.

We list the main problems that we have identified, below, and elaborate on them in the rest of this document. In the main, we limit our comments to the market for mobile data. The issues we wish to highlight at this stage include:

- a) Structural features of the market;
- b) Regulatory issues and concurrent jurisdiction;
- c) Strategic (exclusionary) behavior by large mobile incumbents;
- d) Current network-sharing arrangements;
- e) Spectrum issues; and
- f) New entrants and miscellaneous.

Certain information has been marked as confidential to Cell C. We ask that this information not be disclosed without our consent.

## **1. Structural features of the market**

- 1.1 The provision of data services has become a matter of such great importance that the CC is not alone in seeking to ensure that those matters that impact consumers and competition are identified and monitored, and if necessary, regulated. Regulators around the world are grappling with various aspects of the data market including how best to ensure data protection, privacy, access to personal and public data and competitive prices to consumers.
- 1.2 However, in more developed regulatory systems, the price of data has not been an issue for some time. This is largely because the balance of power and structure of the market – i.e. the number of operators, their respective market shares, and their market power – has already been addressed by various regulatory measures. This is one of the most significant differences between the state of development of the South African data market and that of other markets. This factor alone impacts not only on all those areas mentioned above, but also on the price charged for access to and use of data, in South Africa – and so too, on the consumer.
- 1.3 Specifically, in the South African MNO market we still have two incumbent MNOs that make up the majority of the market on any measure. These operators, MTN Pty Ltd (MTN) and Vodacom Pty Ltd (Vodacom) provide national coverage whereas Cell C and Telkom Mobile (a business unit of Telkom SA SOC Ltd) do

not have national networks and are dependent on roaming services from Vodacom and MTN, respectively. In addition, the market failures in related markets (such as voice call termination) allow the incumbent MNOs to leverage that market power into the data market as well.

- 1.4 It is also self-evident that without access to networks, consumers are not able to access data services. The 2013 National Broadband Policy (SA Connect) prioritized the rollout of broadband networks and services and set ambitious targets for the connection of schools, government facilities and police stations, as well as national coverage and required network speeds<sup>1</sup>. No measurements against these targets have been published but it is widely accepted that the targets have not been achieved, and that South Africa lags the targets by at least two years<sup>2</sup>.
- 1.5 SA Connect also addressed the need to make provision for financing various stages during which demand would also be consolidated particularly within government departments, and funding would be made available for the provision of broadband services within certain municipalities and provinces<sup>3</sup>. In July 2017 Government acknowledged that this programme had not yet begun.<sup>4</sup>
- 1.6 These matters are also of considerable importance when assessing (i) the extent to which broadband services and so data services (of reasonable quality) have been made available within South Africa, and (ii) the factors that influence the provision of data services.
- 1.7 There are several 'upstream' providers in this market. These are the licensees and other entities that make facilities available to 'downstream' participants who provide services directly to consumers. In some cases, licensees will operate in both the upstream and downstream markets. Vodacom, MTN, Cell C and Telkom Mobile (a business unit of Telkom SA SOC Ltd) operate in both markets, building or leasing facilities and network infrastructure and also providing services to

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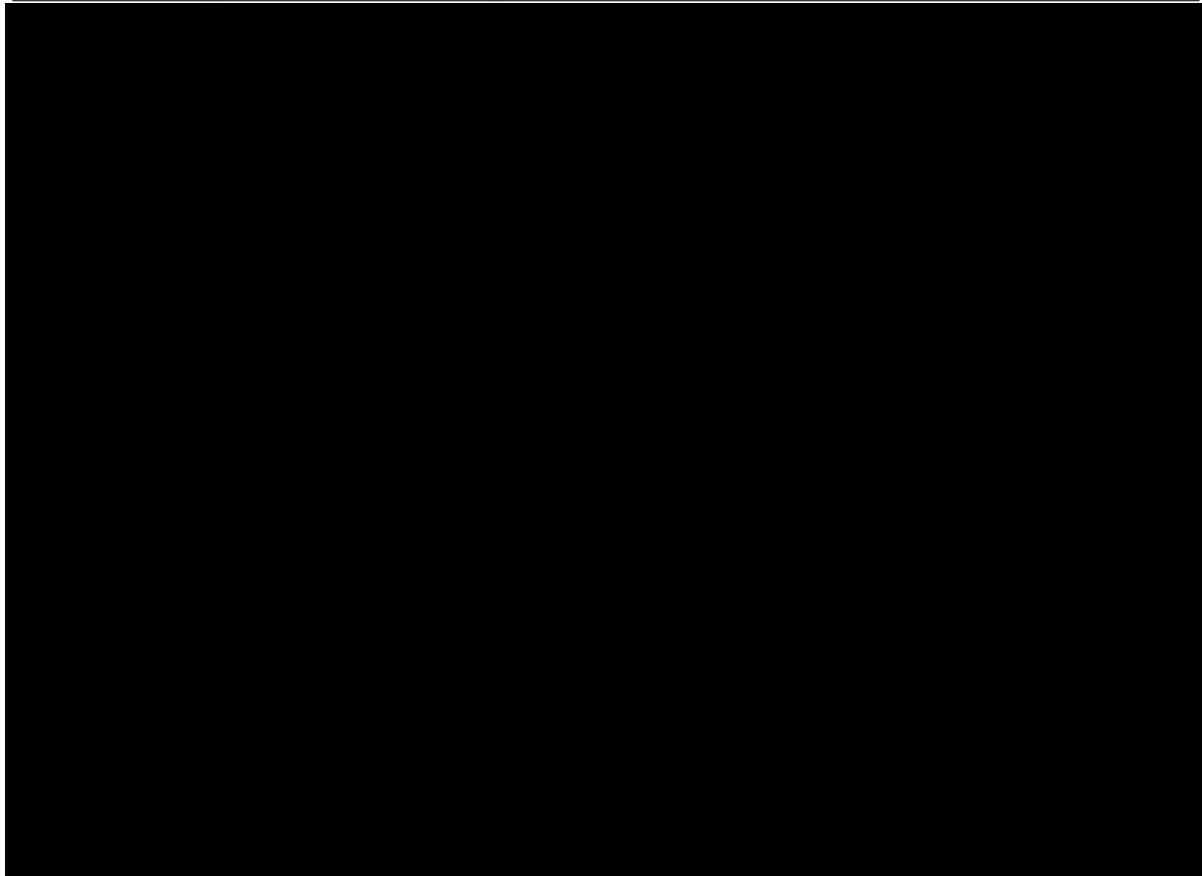
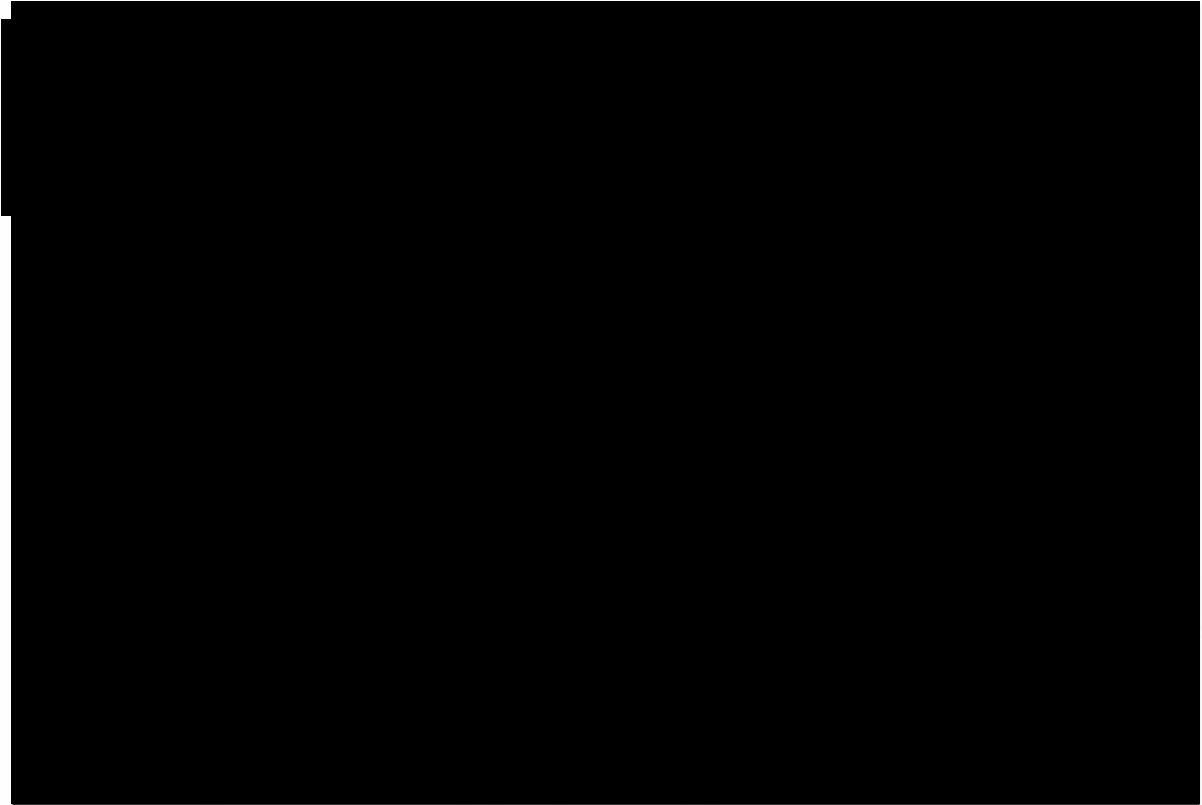
<sup>1</sup> Section 8 of SA Connect.

<sup>2</sup> <http://bmi-t.co.za/content/sa-connect-two-years-where-do-we-stand-review-bmi-techknowledge>

<sup>3</sup> Section 16 of SA Connect.

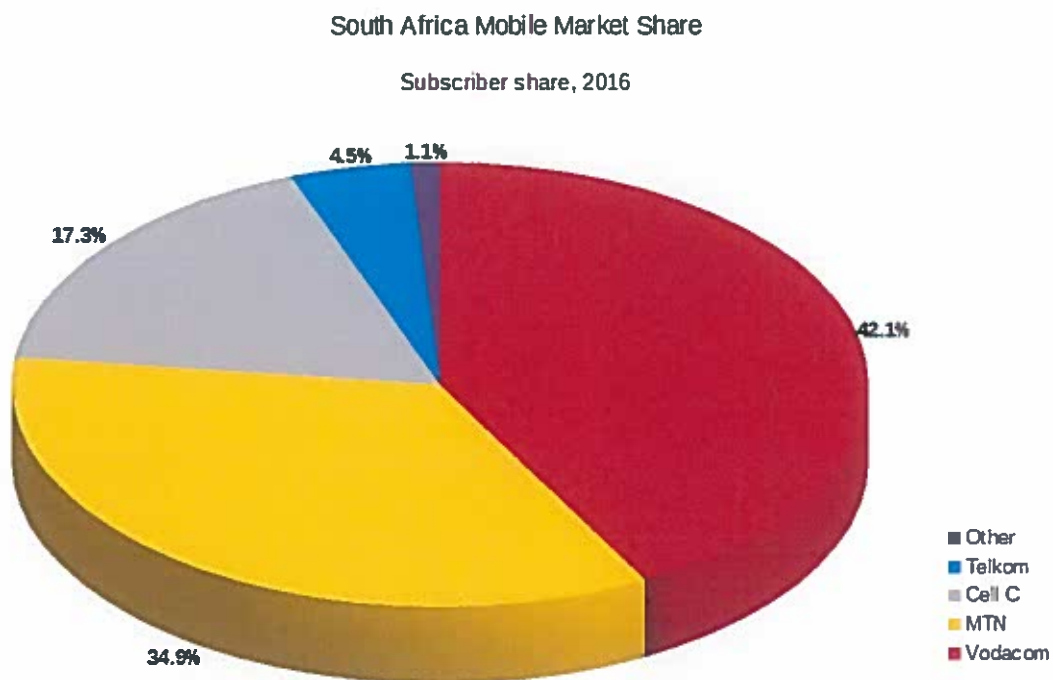
<sup>4</sup> [http://www.itweb.co.za/index.php?option=com\\_content&view=article&id=163357](http://www.itweb.co.za/index.php?option=com_content&view=article&id=163357)

subscribers. It is instructive to consider their current market shares, based on revenue.



- 1.9 The figures clearly show Vodacom and MTN's entrenched dominant position in the data services market – in fact, there has been little change in their market share between 2012 and 2016. Together, they currently constitute more than 90% of the data services market (based on revenue). The oligopolistic nature of this market is also apparent when considering the market's HHI of 3,873 (in 2015). It is generally accepted that a market with an HHI of more than 2,500 is highly concentrated and thus dominated by a few firms, as is currently the case in the data market.
- 1.10 Cell C considers *revenue* to be the only true measure of market power although subscriber numbers are frequently relied upon by the media and operators to represent market share. In Cell C's view, subscriber numbers are not an accurate representation of market share because this measure depends on a number of variables including how an operator measures active subscribers, whether or not those subscribers are subscribers to more than one network so are counted twice, and whether the subscriber is a high or low value subscriber. Low value subscribers produce very little revenue, so even a large number of low value subscribers will not increase revenue and will therefore not assist in growing the share of market of the operator concerned. It is also instructive in assessing whether or not an individual operator is able to compete effectively and in a sustainable way so that use of its network services (traffic) increases, to measure the network usage. How many services are consumed by subscribers and as a result how much traffic is generated? What share of total revenue in the market does that translate to? In the wider economy, how many minutes of communications are consumed in order to enable trade and information-sharing, for example? By maximising the opportunities to make calls and use networks (i.e. by increasing competition), the availability of high quality communications services is increased with associated benefits for trade and information-sharing, for example.
- 1.11 Even comparing subscriber numbers, it is clear that Vodacom and MTN are far larger than their competitors (it is interesting to note the combined size of "others" in the chart below, as this group consists in all of the other many hundreds of licensees that provide services within the electronic communications market). The

late entry of Cell C (in 2001) and Telkom Mobile (in 2010) afforded Vodacom and MTN substantial time to gain market share and to grow large subscriber bases. The result is that late entrants into the market find it difficult to gain more revenue-generating subscribers, especially if there has been significant time for the incumbents to saturate the market<sup>5</sup>. While Cell C and Telkom Mobile have been able to grow their data revenue to some degree, the incumbent's revenue from data remains significantly higher relative to the other MNOs. This is a function of the larger subscriber base that Vodacom and MTN has accrued over time in related markets.



Source: Business Tech News, 28 June 2017

1.12 The greater its market power, the more likely a company is to be able to control the availability of services (supply) and thereby increase demand, and so control price. In 2012 Cell C introduced a new 'flat' rate of 99c per minute. This was significantly lower than the price charged at the time by MTN and Vodacom and this price applied whether or not calls were made from Cell C to other Cell C customers (on-net calls) or from Cell C customers to customers on other networks (off-net calls). This was well-received by the market but neither MTN nor

<sup>5</sup> <https://businesstech.co.za/news/mobile/182301/sa-mobile-market-share-in-2017-vodacom-vs-mtn-vs-cell-c-vs-telkom/>

Vodacom dropped their prices to match this price – because they did not have to. Their subscriber bases were and still are, sufficiently large that they were not significantly affected by the decrease in prices by their competitor. In fact, the on-net pricing strategy has meant that consumers remain with their current provider (i.e. Vodacom or MTN) rather than porting out to Cell C or Telkom Mobile, in the hopes of benefiting from the on-net promotions and cheaper prices. If a new entrant were to launch in the market, they would find it all but impossible to grow market share whilst this behaviour is unchecked.

- 1.13 Market power must also be considered with reference to control of infrastructure. By virtue of their larger networks (which are national), all of MTN, Vodacom and Telkom control a significant portion of network facilities in general<sup>6</sup>. Their size ensures that they benefit from economies of scale and scope in acquiring and installing infrastructure, and obtaining facilities at more attractive prices. Controlling infrastructure in critical areas or areas where access to land is limited (such as high sites, or shopping centre rooftops, or stations) enables those operators to also determine prices independently of one another and of other operators in the market. As we have indicated above, controlling essential facilities also enables operators to determine prices for access, leaving those who need access to those facilities little choice but to pay the price demanded.
- 1.14 Cell C has also contributed to an inquiry currently underway by ICASA, into what are termed “priority markets”. In this submission, Cell C has also addressed the issues facing it and competition in the electronic communications industry in general. We have included this submission as **Annexure A (CONFIDENTIAL)** to this letter for your ease of reference because we consider that it will be useful in situating the CC’s inquiry in context.
- 1.15 ICASA published a report on tariffs charged by licensees for each of voice and data services<sup>7</sup>. This report indicates that Cell C’s charges are the lowest. It is important to understand the hardship suffered by Cell C as a result of its commitment to delivering value to the consumer.

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<sup>6</sup> <https://mybroadband.co.za/news/broadband/144145-these-are-the-companies-who-control-the-internet-in-south-africa.html>

<sup>7</sup> <https://www.icasa.org.za/Portals/0/Consumer/Bi-Annual-Retail-Tariffs-Report-for-1-January-2017-to-30-June-2017.pdf>

## 2. Regulatory issues and concurrent jurisdiction

- 2.1 Cell C is concerned with the lack of regulatory co-ordination in the industry – indeed it is our view that this lack of co-ordination has contributed to or had the effect of entrenching the structural imbalances.
- 2.2 As pointed out by the CC, the sector is regulated by various government bodies, i.e. ICASA, the DTSP and the DOC. We understand that the CC and ICASA have concurrent jurisdiction, as per the South African Competition Act of 89 of 1998 and amendments to the Electronic Communications Act, 2005 (ECA) in 2014, as well as a Memorandum of Agreement concluded between the parties in 2001.
- 2.3 The CC is responsible for the “investigation, control and evaluation of restrictive practices, abuse of dominant position, and mergers”, while ICASA has an ex ante policy mandate to license and regulate broadcasting and electronic communication services in South Africa.<sup>8</sup> The Memorandum sets out the *“manner in which the parties will interact with each other in respect of the investigation, evaluation and analysis of mergers and acquisitions transactions and complaints involving telecommunications and broadcasting matters”*.<sup>9</sup> Specifically it is understood that the CC must deal with complaints about restrictive horizontal and vertical practices and abuse of dominance, while ICASA must deal with contraventions of licence conditions and legislation.
- 2.4 This process was followed in for example, the proposed acquisition of Neotel Pty Ltd by Vodacom, which had to be approved by both the CC and ICASA, due to the implications of the proposed merger on, inter alia, the change in control of spectrum.
- 2.5 As part of its ex ante competition powers, ICASA may promulgate regulations or impose licence conditions aimed at addressing the conduct of licensees that have significant market power (SMP). Section 67 of the ECA sets out how ICASA should define the relevant markets, prescribes the methodology for identifying SMP, and describes how ICASA should go about imposing pro-competitive terms and conditions. ICASA’s mobile termination rate regulation flows from this

<sup>8</sup> Competition Act, 1998.

<sup>9</sup> Government Gazette No. 23857. 20 September 2002. Memorandum of Agreement entered into between the Competition Commission and ICASA (para. 1.1)



mandate. Section 67(8) of the EC Act stipulates the process that ICASA must follow to determine whether a lack of competition in a market justifies imposing pro-competitive licence conditions for licensees who are found to have SMP. It is this process that ICASA has followed to introduce regulated rates for call termination in the fixed and mobile markets<sup>10</sup>.

- 2.6 The CC issued a press release on 18 April 2017 in which they confirmed their decision not to prosecute a complaint by Cell C against MTN and Vodacom in relation to certain exclusionary behaviour (set out in section 3) further. Cell C is concerned that the recommendation of the CC – that ICASA considers market failures that gave rise to the Cell C complaint to the CC about on-net/ off-net pricing by Vodacom and MTN – has not been taken up by ICASA. It seems unlikely that Cell C will get any relief in any forum. We have set out more detail on this in the next section.
- 2.7 Again we note that new entrants would find it difficult to get certainty around the regulatory regime whilst the demarcation of roles and actual implementation by regulatory authorities is so unclear. This may well affect their ability to access investment from third parties.

### **3. Strategic (exclusionary) behavior by large mobile incumbents**

- 3.1 As pointed out above, Cell C was a late entrant in the MNO market and as the third MNO to receive a licence, many years after the entry of Vodacom and MTN, remains a relatively small player, compared to the incumbents.
- 3.2 There have been numerous instances of strategic behaviour by MTN and Vodacom to curb the competitiveness of the smaller players. The increase in mobile termination rates (MTRs) which are the rates that licensees charge one another to take calls from third party networks to their subscribers, by the incumbents, just before the launch of Cell C in 2001 has been well-documented. This impacted hugely on the cost of interconnection into the next decade, and so too on the prices charged to the consumer for telecommunications services.
- 3.3 In addition, Cell C explained in detail in a complaint to the CC in 2013 how MTN and Vodacom have grown and continue to grow their subscriber bases by virtue of a phenomenon known as the “club effect”. This club effect occurs when a

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<sup>10</sup> Government Gazette No. 38042. 30 September 2014. Call Termination Regulations, 2014.

licensee charges less to call on-net (within the same network) than to call off-net (to a different network). Subscribers are encouraged to subscribe to the same network to benefit from the lower on-net calls – calls that take place within a community or a club. By reducing on-net prices only, the club increases in size. The increase in their subscriber base results in an increase in their economies of scale and scope – something that smaller operator such as Cell C has always lacked.

- 3.4 A lack of scale is likely to result in smaller operators being less likely to be able to recover their fixed costs. If small operators cannot recover fixed costs, they will be less likely to compete on price aggressively over the long term, because they will need to maintain their margins. Put another way, it is clear that carrying more traffic allows an operator to leverage the economies of scale in terms of network capacity, and improve its revenue and EBITDA position. Cell C's aim, as the challenger network supporting MVNOs, is to increase its share of the traffic in the total market, as carrying more traffic enables Cell C to satisfy a greater consumer utility. Cell C gains little benefit from having a subscriber registered on its network, what matters is that the subscriber should generate traffic, utility and revenues, in other words it must be an active subscriber. Carrying more traffic allows Cell C to improve its revenue and margin position.
- 3.5 The graphs below demonstrate the impact that scale differences have on the cost structures of each of MTN, Vodacom and Cell C. All results are shown per calendar year, and sourced from operators' annual reports and quarterly results. The Telkom Mobile service revenue market share is based on FY 2017 (ending March 2017). The cost of voice call termination is based on ICASA's regulated rate i.e. the rate arrived at using the cost models developed by ICASA's consultants as input during the 2014 MTR Review process.<sup>11</sup> The graphs are in fact indicative of the costs in relation to voice services, not data services, however, this is the only "official" cost information available and we include it as a proxy for the underlying cost differences due to scale between the large and the small operators for data services. The graphs are confidential because they are indicative of private Cell C information.

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<sup>11</sup> The graph formed part of the ICASA information provided during the MTR consultations in 2014.

3.6 In the United Kingdom, the regulatory authority, OFCOM, has stated that *"A key feature of disruptive firms is their ability to compete vigorously and prioritise gaining market share above other considerations such as profits or cost recovery in the short or even medium term."*<sup>12</sup> One of the criteria to do this is that *"a firm must be in a stable financial position to allow it to pursue and maintain a disruptive strategy such as acting aggressively or creating innovative offerings over a period*

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<sup>12</sup> Ofcom. 2016. *A cross-country econometric analysis of the effect of disruptive firms on mobile pricing*  
Available online: [https://www.ofcom.org.uk/data/assets/pdf\\_file/0019/74107/research\\_document.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0019/74107/research_document.pdf)

*which is long enough to act as a constraint on incumbent firms.*<sup>13</sup> It is therefore important for Cell C to have stable and sustainable financial position in order to allow it to remain disruptive in the longer term. A sustainable level of disruption ultimately encourages firms to invest and remain competitive in the market and is likely to maximise the benefits to consumers in the long term.<sup>14</sup>

- 3.7 The wording of the CC's April 2017 press release which deals with its decision on the complaint by Cell C against the anti-competitive behaviour of MTN and Vodacom, is instructive: *"...However, there is evidence to suggest that this conduct and other features of the market, in particular the price differentials applied for on-net and off-net calls as well as long-term subscribers' contracts have made it difficult for late entrants such as Cell C to compete effectively. There is therefore a need to look broadly into the state of competition in the mobile telephony market in South Africa, specifically at the retail level, as the market is still dominated by two mobile market players, years after the licensing of Cell C and Telkom Mobile. In this regard, the Commission will engage the Independent Communications Authority of South Africa (ICASA) to explore regulatory interventions that may be necessary to make the market competitive"*.
- 3.8 A further example of the exclusionary behavior of the incumbents is set out in the next section, dealing with the terms of access to infrastructure and national roaming (see paragraphs 4.8 to 4.10).
- 3.9 While such strategic behaviour has mostly been evident in the voice market, this market power can also be leveraged into data markets by the incumbents with market power.

#### **4. Current arrangements for sharing network infrastructure**

- 4.1 In telecommunications markets, infrastructure-sharing is crucial to market development, as infrastructure is very expensive and infrastructure-sharing makes more sense from an economic perspective. National mobile networks are almost prohibitively expensive to construct from scratch – providing coverage in rural or outlying areas where demand is low is also far more expensive than in urban, high density areas. Inevitably high costs are reflected in high prices.

<sup>13</sup> *ibid.*

<sup>14</sup> [https://www.ofcom.org.uk/data/assets/pdf\\_file/0019/74107/research\\_document.pdf](https://www.ofcom.org.uk/data/assets/pdf_file/0019/74107/research_document.pdf)

- 4.2 In order to avoid the unnecessary duplication of infrastructure (and the associated high cost), and to protect the environment and for the convenience of citizens, Governments around the world promote the sharing of certain electronic network facilities<sup>15</sup>. In South Africa these are most commonly the ducts in which fibre is laid, the fibre itself if there is spare capacity on that fibre, manholes, space on premises, space on masts used in base stations, backhaul, space in cable landing stations, space in data centres (central points for connecting networks), and certain radio apparatus. The ECA obliges licensees to share their facilities in Chapter 8. The only grounds on which a licensee may refuse a request is if the request is not “reasonable”. Section 43(4) provides that a request is “reasonable” if it is “(a) *technically and economically feasible; and (b) will promote the efficient use of electronic networks and services*”.
- 4.3 However, the price that may be charged by the owner of facilities has not been regulated although section 47 of the ECA provides that “*The Authority may prescribe regulations establishing a framework for the establishment and implementation of wholesale rates applicable to specified types of electronic communications facilities and associated services taking into account the provisions of Chapter 10.*” Chapter 10 (section 67) of the ECA deals with competition.
- 4.4 National roaming – the practice of allowing one licensee to send traffic from its customers over the network of another licensee in the absence of its own network – is a vital part of a competitive market. It is often the case that when a new licensee enters the electronic communications market in any country, that licensee is afforded a period during which it may roam on the network of a more established licensee. This was the case when Cell C entered the market in 2001.
- 4.5 At the time, Vodacom and MTN were the only operators licensed to provide mobile cellular services (as they were termed at the time). Cell C was able to conclude a national roaming agreement with Vodacom which allowed Cell C to market itself as a third national operator even though it had yet to build out its own network in most of South Africa. Consumers were still able to access services if they subscribed to Cell C, by re-establishing a call on the Vodacom network in

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<sup>15</sup> The ECA defines “electronic communications facilities” as including wire, cables, antennae, masts, satellite transponders, circuits, cable landing stations, international gateways, earth stations, radio apparatus, exchange buildings, data centres, carrier-neutral hotels, collocation space, monitoring equipment, space on poles, ducts, cable trays, manholes, handholds, conduits; and associated support systems.

areas covered by the roaming agreement. Telkom Mobile which does not have its own licence, has subsequently concluded a national roaming agreement with MTN. The terms of these agreements are not made public, and are not regulated at all under the ECA or otherwise. Cell C has no agreement with Vodacom currently for LTE roaming services and we expect that it will be very expensive to obtain these services. Hence Cell C cannot make its promotional or cheaper data packages available in many of the areas in which it roams on Vodacom's network due to fact that it will make a loss from the first megabyte of data consumed on Vodacom's network. This effectively precludes customers in those areas from accessing the promotional rates or cheaper data services that Cell C makes available to other customers in areas in which it has its own network. In essence, Cell C's promotional or cheaper data services are limited to a smaller base i.e. customers in non-roaming areas. This has an effect on Cell C similar to the effect we describe in paragraph 3.3 above, namely to prevent the growth of Cell C's subscriber base and market power.

- 4.6 New entrants wishing to enter the market now will likely struggle to gain access to existing infrastructure on reasonable terms, as Cell C has struggled since its launch.
- 4.7 In addition, ICASA has not fulfilled the requirements of section 43(8) of the ECA which obliges it to "prescribe a list of essential facilities" and a list of examples of essential facilities is given. The CC will be familiar with the definition of essential facilities, which are defined in the ECA as "*an electronic communications facility or combination of electronic communications or other facilities that is exclusively or predominantly provided by a single or limited number of licensees and cannot feasibly (whether economically, environmentally or technically) be substituted or duplicated in order to provide a service in terms of this Act*". Section 43(8A) of the ECA deems requests for essential facilities to promote efficient use of electronic networks and services. In addition, "*all electronic communications network service licensees receiving requests [for access to essential facilities] are required to agree on non-discriminatory terms and conditions of a facilities-leasing agreement for those essential facilities within 20 days of receiving the request*"<sup>16</sup>.
- 4.8 In October 2016 an ICT National Policy White Paper (National Policy) was published by the Department of Telecommunications and Postal Services (DTPS),

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<sup>16</sup> Section 43(8A)(b) of the ECA.

in which an entire chapter is devoted to the concept of “rapid deployment”. This is also addressed in the ECA in Chapter 4. Since Government has made it a priority to promote the rollout and availability of broadband services, the ECA gives certain rights to electronic communications network service licensees (i.e. those licensees authorized to build, operate and maintain electronic communications networks) to enter on certain types of land and to construct their network facilities including in underground pipes, over bridges, across waterways, and under streets. Licensees also have rights to move fences and trees, for example, and to liaise with third parties regarding electrical works. These legal rights are supplemented by a requirement in the ECA that the DTPS give a direction to ICASA to develop regulations for obtaining permits, authorisations, or approvals to deploy network infrastructure across public and private land<sup>17</sup>. The time periods prescribed for the directions and the regulations (even under the more recent National Policy) have long since passed.

- 4.9 The difficulties faced in negotiating reasonable prices for access to facilities or obtaining access at all that Cell C has experienced when dealing with MTN or Vodacom have not been apparent at all in a recent transaction between Vodacom and the former Wireless Business Solutions Pty Ltd (WBS), now branded “Rain”. It so happens that Rain has been licensed to use spectrum in a high demand band – in other words, in a band that can be used for high speed broadband services which has not been made available to other licensees. Vodacom attempted to gain access to a similar band by acquiring Neotel and its spectrum licences in 2015, which transaction was approved only conditionally by the CC but which commercially may have been replaced by the transaction with Rain. We explain the importance of spectrum in more detail in sections 5 and 6.
- 4.10 Although Cell C has not been able to gain access to all the relevant documents in the Vodacom/Rain transaction, it is clear from the agreements that we have been provided with (from ICASA) that Vodacom has concluded a national roaming agreement with Rain, whose network hardly extends even outside the province of Gauteng, for almost the same price as Vodacom is charging Rain to gain access to 5,000 of Vodacom’s masts (or towers). In effect, this transaction is nothing more than another attempt by Vodacom to acquire spectrum from a third party

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<sup>17</sup> Section 21 of the ECA is headed “Rapid deployment of electronic communications facilities”.

licensee. Under current legislation, spectrum-sharing, trading or leasing is not permitted.

- 4.11 The transaction is cause for concern for Cell C not only because Vodacom's dominance will be entrenched further if it is able to gain access to Rain's valuable spectrum in the guise of a network-sharing or roaming agreement, but also because the terms on which Vodacom has agreed to allow access to its sites with Rain are far more favourable than the terms that Cell C has received from Vodacom for some of the same sites and in general.
- 4.12 Several companies have entered the market with a view to providing infrastructure only (not services). These include American Tower Company (ATC), Dark Fibre Africa, and Vumatel Pty Ltd. With the exception of ATC, these companies are licensees but they do not themselves provide services other than capacity over infrastructure on a wholesale basis, to other licensees including Cell C, and to internet service providers. Because on the one hand ATC does not fall within ICASA's jurisdiction and on the other hand, ICASA has not regulated prices for access to infrastructure even where licensees are concerned, an entity in control of essential facilities can set prices for access without reference to anyone.
- 4.13 This trend extends to public and private sector entities in control of premises which are suitable for the installation of network infrastructure because of their location or because of the need to provide services at that location to consumers. For example, the Airports Company of South Africa (ACSA) has recently increased its prices for accessing any of their 9 airports, by above 200%. If Cell C wants to provide services within airports, it must pay this amount to ACSA – there is no option.

## **5. Spectrum issues**

- 5.1 It is a fundamental principle of spectrum management worldwide that spectrum that is required for provision of, in particular, services over mobile networks, be allocated in a fair and transparent manner because it confers a significant benefit on the holder. As technology has evolved and consumer demand for data has escalated, all of the South African mobile operators (except Telkom Mobile), have felt increasing pressure on the capacity they can produce on their networks to meet that demand.



- 5.2 One of the ways to increase capacity is to acquire more spectrum, the other is to build more network infrastructure. After repeated calls by operators for the allocation of more spectrum in bands suitable for broadband and data services<sup>18</sup> commonly referred to as 'spectrum in high demand', ICASA announced its intention to hold a spectrum auction by publishing an Invitation to Apply for spectrum in October 2016 (ITA). There were numerous irregularities in this process and in the ITA and consequently the Minister of DTPS and several licensees have taken ICASA on review in the High Court. The DTPS has indicated that ICASA is not authorized to publish an ITA for spectrum in high demand until the Minister issues a policy direction to ICASA in this regard.
- 5.3 It is also important to note that the structure of the ITA and the way in which spectrum was to be made available (in Lots) will have the result, if the ITA proceeds without change, of enabling the larger operators with greater financial resources, to out-bid the smaller operators for the most attractive and useful Lots (by "useful" we mean that two of the Lots are made up of spectrum that has certain advantages over the other Lots). This will have the effect of further entrenching their market power because they will have access to an amount of spectrum which smaller operators do not have, arguably in a more attractive or useful configuration.
- 5.4 The matter is ongoing – the Court proceedings have not closed and the Minister has not issued a policy direction. As a result, mobile operators are constrained in their ability to provide high speed data services. A short technical explanation of this is attached to the submission as **Annexure B**.
- 5.5 As noted above, if a licensee wishes to increase its capacity to provide data services, it has only two ways to do this – and in both cases, licensees face constraints.

## 6. New entrants and miscellaneous

- 6.1 The award of spectrum which is a scarce resource, on any party, would confer a benefit including a competitive benefit, on that party. It enables the provision of services on a wireless and mobile basis. However, it is a finite resource, and so it is obvious that its allocation and use must be carefully considered and managed.

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<sup>18</sup> These bands are for present purposes, the 800MHz band and the 2600MHz (or 2.6GHz) bands.

- 6.2 For this reason, and because of the experiences that Cell C has had over the years – without regulatory intervention to assist it – whether spectrum should be set aside for new entrants is questionable. We say this because:
- 6.2.1 A new entrant will not have the network infrastructure available to use the spectrum for some time;
  - 6.2.2 Even if the new entrant concludes a roaming agreement (which have indicated is not easy to do with dominant operators), it will still take years to roll out a national network, and use the spectrum efficiently and in the meantime existing operators are likely to have a greater need for the spectrum;
  - 6.2.3 The mechanism for awarding spectrum is usually an auction process, or beauty contest. In both cases, the price payable for spectrum can be so enormous as to preclude even existing operators from gaining more spectrum, let alone new entrants with limited resources. All 'input' costs will affect pricing; and
  - 6.2.4 Although Cell C hosts most if not all of the "mobile virtual network operators" on its network (despite its small size) in order to create more competition in services, other licensees are reluctant to open up their networks even to the extent of sharing capacity. MVNOs as they are known, do not need licences to make services available in South Africa, for example Virgin Mobile, FNB Connect and Mr Price.. If other licensees are reluctant to host competing service providers, it is unlikely they will host new entrants.
- 6.3 The questions raised in paragraph 14 of the CC's request require extremely complex answers, some of which may be controversial.
- 6.3.1 In a country where so many people still lack basic amenities such as roads, electricity and sewerage infrastructure, the focus on rolling out national high speed data services seems misplaced. Similarly the costs that operators will have to incur to meet some of the targets set out in SA Connect will place operators under significant pressure financially – particularly in this economy – which in itself will have an effect on prices.
  - 6.3.2 The availability and price of devices capable of offering data services will obviously also be a factor – and with it, the level of demand. In certain areas of the country, particularly those without electricity or with limited electricity, the power and other infrastructure needed for the operation of networks as well as

these devices may simply not be available. There are obviously some solutions including solar power and delivering services to one central point in a rural town or village, such as a school library or post office for general use, but the SA Connect targets envisage individual use at high speed, nationwide.

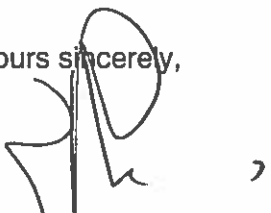
6.3.3 We also believe that imposing the same targets on all operators regardless of size and existing coverage, is unfair and unreasonable. In Cell C's view, the goals of SA Connect have, since 2013, been overtaken by other priorities and should be revised against what is possible, appropriate and proportionate in the circumstances, particularly for smaller licensees that do not have economies of scale and scope.

## 7 Concluding remarks

As stated at the outset, Cell C welcomes the initiative taken by the CC to address market failures in the data market. Cell C wants to make a contribution to this process as it has a deep understanding of the functioning as well as failures in these markets. While many of the issues described above might not prima facie directly relate to data services markets, these markets are all interlinked and it is important to understand how firms with market power can leverage such power from one market into another (e.g. the data services market). It is Cell C's firm belief that a more level playing field will benefit all in the long run, as more competition will drive down costs and prices.

Cell C looks forward to engaging with the Commission on these important matters.

Yours sincerely,



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**Themba Phiri**

**Executive Head: Regulatory Affairs**

**ANNEXURE B: TECHNICAL EXPLANATION OF SPECTRUM USE**

The following explanation is taken from paragraphs 22 to 33 of the Founding Affidavit in Cell C's review of the ICASA ITA<sup>19</sup>:

“Cellular mobile radio systems, or mobile networks, can be categorised as systems that provide high-mobility, wide-area, two-way wireless voice and data communications using electromagnetic carrier waves in the appropriate ranges of electromagnetic spectrum. The appropriate spectrum for cellular use has been harmonised internationally for this purpose by the International Telecommunications Union (“ITU”) and falls between the 450 and 3,500MHz bands. Owing to the different characteristics of the bands comprising spectrum, some are more valuable than others, thus attracting considerable interest from operators, with the result that their demand exceeds supply. This is the reason some bands are called high-demand spectrum bands.

Mobile networks provide two-way communications for users, with the transmission from mobile devices to base stations within a cellular network (referred to as the uplink), and transmission from the base station to devices (referred to as the downlink). Base stations are the tower sites that host the radio antennae that transmit voice and data traffic. Although mobile networks were originally designed primarily to provide two-way wireless *voice* services, rapid growth in the use of mobile devices has been accompanied by greater demand for data services alongside voice.

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<sup>19</sup> Cell C Pty Ltd v the Acting Chairperson of ICASA and others. Case No. 68096/2016 in the High Court of South Africa, Gauteng Division.



For this reason second, third and fourth generation systems have been introduced over time. Second generation, or 2G, systems introduced some data capability to cellular networks. Initially, 2G data services were in the form of short messaging services ("SMS"), before a wider range of mobile data services became possible by enabling the transmission of data in Internet Protocol ("IP") packets over the same frequency channels used for 2G voice.

However, 2G systems struggle to cope with the amount of data traffic that has to be carried by mobile networks, and so third generation ("3G") systems were developed to provide the high bit-rate services needed for the transmission of high-quality images and video, as well as higher-speed Internet browsing, over cellular networks. A substantial increase was noted in the number of mobile subscribers and the data traffic carried by mobile networks from around 2000 (when 3G networks were first introduced in some markets) to around 2010/2011.

Around 2010, it was apparent that data traffic volumes on many cellular networks had overtaken the volumes of voice traffic being carried by those networks. With continued growth in the use of data connections, and an increase in user expectations of data rates driven by the requirement to browse Internet and other data services in wireless networks, work began to develop the 'Long Term Evolution' ("LTE") standard, as the basis for fourth-generation ("4G") mobile systems. LTE deployments worldwide are gathering momentum, and many mobile subscribers in markets where 4G is available, are migrating from 3G to 4G.



IMT is the terminology used by the ITU to refer to internationally harmonised and standardised mobile broadband technologies. Today, the term 'IMT' embraces both 3G and 4G mobile equipment standards. The term IMT has been adopted by many regulators when setting out licensing proposals for 3G and subsequently for 4G. The most widely used spectrum bands globally for 4G today include the 700MHz, 800MHz, 1800MHz and 2.6GHz bands.

In its initial licensing of spectrum (in 1993 to MTN and Vodacom, 1997 to Telkom and in 2001 to Cell C) ICASA sought to assign equal spectrum to all the interested licensees. Although Cell C was assigned spectrum after MTN and Vodacom, it now has an almost equal apportionment of spectrum.

However, important differences in the assignment remain. Both the MTN and Cell C assignment in the 900MHz band are not contiguous. In some cases this means that the later of the spectrum bands assigned is not situated immediately next to existing spectrum bands assigned and the spectrum cannot be bundled together for LTE use. The bundling of spectrum for the provision of standard LTE services can be done only where the spectrum assigned is contiguous. This results in difficulties in network equipment having to be differently configured for each band, and this results in higher costs to Cell C. This is a recognised factor in assessing competitive disadvantages in mobile telecommunications.

Currently, in order to meet demand and maintain a quality service, operators must either:



- 1.1. increase capacity on their networks in order to offer more or adequate service by spending significant amounts of money on building more base stations (which is difficult in an ever more built up environment, and in light of environmental concerns); or
- 1.2. acquire more spectrum.

In South Africa, mobile operators currently only have access to frequencies originally assigned to them for use by 2G and 3G networks. The availability of further frequencies for 4G is therefore wholly dependent upon a future award of spectrum in the 700MHz, 800MHz and 2.6GHz bands (this is anticipated in the ITA), which are the only bands of spectrum presently available for mobile use. Operators are currently deploying and putting to trial LTE services even in relatively unpopular bands, indicating the importance that they attach to being able to offer at least some LTE service as soon as possible, to maintain the competitiveness of their services.

Spectrum is also distinguished by whether it falls within the low or high frequency bands:

- 1.3. In simple terms, low frequency spectrum (in this case, spectrum in the 700 and 800MHz bands) has much greater range and therefore networks that are deployed using this spectrum are less costly to roll out because they require the construction of fewer base stations. Low frequency spectrum is particularly important then for coverage outside of urban areas where the



terrain is less built up and it is also true that usage, and therefore revenue, are likely to be significantly lower than in urban areas.

- 1.4. Whilst this spectrum is very important to be able to provide broadband services (high speed data services) to rural areas, spectrum in these two bands is not yet available for IMT use in South Africa as broadcasters have not yet been migrated off this spectrum band, despite an internationally agreed deadline for this to happen so that the necessary spectrum would be available for IMT services.
- 1.5. High frequency spectrum is situated in the 2600MHz or 2.6GHz band. Whilst this frequency offers very good speed, it is not possible to cover significant distances using this spectrum because of its physical characteristics. Therefore it is better suited to networks situated in urban or more built-up areas where more base stations are in any event necessary to ensure sufficient capacity for the greater demand. This band of spectrum is currently available for licensing.

To provide national coverage in the most efficient and least costly manner and to ensure that high-speed broadband services are available to all of South Africa's citizens, an operator should be licensed to use frequency in both the low and high bands within its network."