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6 May 2021

Mr Davis Kgosimolao Moshweunyane  
Independent Communications Authority of South Africa  
Per email: [Covid19regulations@icasa.org.za](mailto:Covid19regulations@icasa.org.za)

Dear Mr Moshweunyane

**Re: Submission in respect of the ICT COVID-19 National Disaster Regulations**

The Tertiary Education and Research Network of South Africa NPC (TENET) welcomes the invitation to provide written representation on the ICT COVID-19 National Disaster Regulations published in Government Notice 226 of April 2021.

TENET is a non-profit company established by the higher education sector to serve that sector's niche connectivity and ICT requirements. It holds IECN and IECNS licenses and is the operating partner of the South African National Research and Education Network (NREN). This network serves some 350 separate sites of 85 institutions of higher learning and research, including all 26 public universities in South Africa, and has points of presence on three continents.

TENET further acts on behalf of the Department of Higher Education and Training to approve zero-rating for public universities and AC.ZA domain holders, and is represented on the ministerial task team convened to advise the Minister on zero-rating.

It is this aspect of the invitation — issue 15; further considerations the Authority should take into account with respect to zero-rating — that the attached submission concerns itself with.

Our submission has received input from, and is supported by, both Universities South Africa and Higher Education Information Technology South Africa.

TENET undertakes to make itself available to the Authority should you require clarification of any aspect of our submission, or in the event that the Authority requires further input on the issue or zero-rating.

Yours sincerely,

Guy Halse  
Executive Officer: Trust & Identity

# Submission in respect of the ICT COVID-19 National Disaster Regulations



## 1. Introduction

- 1.1. TENET is the operating partner of the South African National Research and Education Network and, in this capacity, represents some 85 institutions of higher learning and research, including all 26 public universities in South Africa. TENET further acts on behalf of the Department of Higher Education and Training in the approval of zero-rating for public universities and AC.ZA domain holders, as provided for by section 4.2 of Government Notice 651 of June 2020.
- 1.2. Universities South Africa (USAf) is a membership-based organisation established as the representative body of South Africa's public universities.
- 1.3. Higher Education Information Technology South Africa (HEITSA) is a non-profit company and public benefit organisation that represents the ICT practitioners of all 26 public universities in South Africa.
- 1.4. Through our experience with the zero-rating process, and having collated the input of stakeholders within the public universities, TENET, USAf, and HEITSA would like to make the following observations regarding issue 15 (further considerations the Authority should take into account with respect to zero-rating).

## 2. Basis for zero-rating

- 2.1. The original requirement for zero-rating of educational sites came from direction 9.1 of the Electronic Communications, Postal, and Broadcasting Directions published in Government Notice 417 of March 2020, and ICASA's regulation 6(14A) has been broadly interpreted in the context of that direction.
- 2.2. Regulation 6(14A) requires the zero-rating of "all educational sites" whereas direction 9.1 contained the four words "local educational content websites". Each of the four words in direction 9.1 has been ascribed specific meaning by both the Department of Communications and Digital Technologies (DoCDT) and by licensees. This meaning was further ratified by Government Notice 651 of June 2020 and in direct consultations between the DoCDT and mobile network operators. Thus, notwithstanding the broader nature of regulation 6(14A), the actual implementation of zero-rating for the higher education sector remains constrained by direction 9.1.
- 2.3. Moreover, the interpretation of direction 9.1 itself seems to be significantly influenced by recommendation 37.3 in the Competition Commission's 2019 report of its findings in their Data Services Market Inquiry<sup>1</sup> and by their subsequent settlements with both Vodacom and MTN.
- 2.4. Whilst well-intentioned, the initial implementation of this recommendation, and thus of the current approach to zero-rating, was done without any meaningful consultation with the sector it sought to empower.

## 3. Lack of definitions hurting the sector

- 3.1. Unfortunately, the narrow interpretation of the requirement for zero-rating and a lack of clear definitions means there is a significant disconnect between those sites that licensees are willing to zero-rate and those that are pedagogically relevant for emergency remote teaching and the continuation of learning. While our experience of

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<sup>1</sup> <http://www.compcom.co.za/wp-content/uploads/2019/12/Data-Services-Inquiry-Summary.pdf>

this is within the post-school education and training sector, empirical evidence suggests that it holds equally true in the basic education sector.

- 3.2. For example, the word “local” has been adjudged to mean that content physically hosted outside the borders of the Republic of South Africa does not qualify for zero-rating, even if such content is used exclusively by a South African institution.
- 3.3. The inclusion of this constraint was no doubt based on the assumption that international connectivity constituted a significant cost burden for operators. Unfortunately, while that may have been true some years ago, this reflects a poor understanding of both the provisioning of international connectivity and the “cloud” nature of the Internet in 2020/2021. This flawed assumption has allowed some licensees to intentionally and artificially constrain the sites they zero-rate simply on the basis that they are not hosted in South Africa.
- 3.4. Similarly, the word “websites” has been interpreted in the narrowest possible sense to mean primarily static content and images on the web. Several licensees have used this to exclude “web applications” and any “media-rich” content. Again this reflects a poor understanding of the current nature of the Internet and how it is utilised in teaching and learning.
- 3.5. Moreover, modern webpages routinely draw resources from multiple sources located on many different websites, some of which may be deemed out-of-scope by the working definitions. The consequence is that, as the intended beneficiaries of zero-rating, students and learners are not readily able to determine whether a particular zero-rated site is genuinely available to them free of charge.

#### **4. Expanding the scope**

- 4.1. The reality of education in 2021 is that pedagogically relevant content is no longer constrained to an institutional website or even a small number of websites.
- 4.2. To facilitate synchronous learning — a requirement for, among other things, the adequate supervision of postgraduate students — access to audio and video communication tools such as Microsoft Teams, Zoom, and Google Classroom is required.
- 4.3. Even within the bounds of purely asynchronous learning, it is substantially easier to relay a complex concept utilising a short video than by means of text or diagrams. In the case of technical and vocational education it is often indispensably necessary. Such resources abound but are often hosted on YouTube or other Internet sites that provide general video content.
- 4.4. Unfortunately, the nature of such systems is that they are not operated exclusively for educational purposes. They are nevertheless deeply relevant to that purpose. Their broad exclusion from the current implementation of the regulations has profound implications for the quality of remote teaching and learning that is possible within South African higher educational institutions.

#### **5. Adapting the regulations to technical constraints**

- 5.1. Higher educational institutions are well aware that licensees operate under technical constraints and that it is not always possible to differentiate what might be educationally relevant from regular commodity Internet traffic. Indeed, this is a challenge that many of them address on their own campus networks daily.

- 5.2. For this reason both the sector and individual institutions have proposed a number of workarounds, all of which are loosely based on the idea of identifying the subscriber as a bona fide member of a higher educational institution rather than attempting to categorise the individual websites they might be visiting.
- 5.3. These include solutions (such as VPNs and reverse proxies) that work within the constraints of the existing technical paradigm but that do not strictly meet the definition within either direction 9.1 or regulation 6(14A). They also include mechanisms to authenticate educational users on public WiFi hotspots<sup>2</sup>, the provision of sector-specific data bundles that ring-fence the zero-rating of multi-tenanted systems, and numerous other ideas.
- 5.4. As a network operator itself, TENET believes that it is possible to find a reasonable balance between the requirements of the educational sector and the commercial constraints faced by licensees. However, as with e.g. number portability, doing so would likely involve a willingness to invest in and develop new systems that address the shortcomings of the current zero-rating mechanisms.
- 5.5. Unfortunately, in the absence of a clear commercial gain from doing so, such an investment in the future of our country will only occur if mandated by effective regulation developed in consultation with the educational sector.

## **6. Regulation beyond the state of disaster**

- 6.1. Both direction 9.1 and regulation 6(14A) are strongly tied to the declaration of a national state of disaster and explicitly fall away once the state of disaster is lifted.
- 6.2. However, the COVID-19 pandemic has fundamentally and permanently transformed the education landscape. Globally the educational sector expects to retain the current hybrid or blended model of teaching for the foreseeable future<sup>3</sup>. As a result, the need for remote access to educational content will not fall away when the COVID-19 pandemic subsides or when the national state of disaster is lifted.
- 6.3. Given South Africa's spatial and socio-economic challenges, the normalisation of blended learning will continue to exacerbate the existing digital divide unless meaningful steps can be taken to ensure equitable access to educational resources. Such steps will, by necessity, include the continued provision of relevant and affordable access to educational content.
- 6.4. For this reason, TENET, USAf, HEITSA and the post-school education and training sector as a whole would welcome long term, permanent "zero-rating" regulation that continues to ensure that all students and learners have free or low-cost access to the learning resources they need to succeed.
- 6.5. Such regulation might finally provide the sort of relief originally intended by the "E-rate" legislation<sup>4</sup>.

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<sup>2</sup> By means of the existing eduroam wireless roaming network — see <https://eduroam.ac.za/beyond/>.

<sup>3</sup> <https://library.educause.edu/resources/2021/4/2021-educause-horizon-report-teaching-and-learning-edition>

<sup>4</sup> Section 73 of the Electronic Communications Act, 2005