PARADIGM INITIATIVE

OONI

Tightening the Noose on Freedom of Expression

2018 Status of Internet Freedom in Nigeria

A research study by:
Paradigm Initiative
Open Observatory of Network Interference (OONI)

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About

Paradigm Initiative

Paradigm Initiative is a social enterprise that builds an ICT-enabled support system and advocates digital rights in order to improve livelihoods for underserved youth.

Our programs include digital inclusion programs such as the Life Skills, ICT, Financial Readiness, Entrepreneurship (**LIFE**) Training, **Techtiary** program and a digital rights program.

Across our offices in Nigeria (Aba, Abuja, Ajegunle, Kano, Yaba) and Cameroon (Yaoundé), we work to connect under-served youth with improved livelihoods through our digital inclusion and digital rights programs.

OONI

The Open Observatory of Network Interference (OONI) is a free software project under The Tor Project that aims to increase transparency of internet censorship around the world.

To this end, OONI develops free and open source software (called OONI Probe) designed to measure various forms of network interference, such as the blocking of sites and instant messaging apps.

Hundreds of thousands of network measurements are collected from more than 200 countries every month, contributing to OONI Explorer, one of the world's largest publicly available resources on internet censorship.

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Executive Summary and Key Findings

This report reviews the state of digital rights and freedoms in Africa's most populous country, which also has the largest number of Internet users on the continent.

The report builds on the 2016 edition to report expanding government surveillance programs, the progress of legislation and policies which could hurt freedom of expression and other digital rights, the increasing number of arrests of citizens and journalists for comments made online and the blocking of 21 websites by the Nigerian government in October 2017. In response to a poll gauging how free Nigerians feel to express themselves on social media, 40% of respondents reported not feeling free to express themselves on social media.

This report was compiled in partnership with The Open Observatory of Network Interference (OONI).

Introduction

The Internet has had a transformational effect on every aspect of Nigerian society.

From the use of desktops, laptops and other computing devices in offices across the nation, to the ubiquitous use of Internet connected mobile devices by millions of Nigerians, to the millions of Nigerian youths who congregate on social media platforms such as Facebook, Twitter, Whatsapp, Instagram and Google+, to the crucial Internet connected financial and health services across the nation, to the millions of Nigerians who use the Internet to shop online, search for information or just hail a ride via one of the online ride hailing platforms, there is no doubt that the Internet has permeated every segment of the Nigerian society.

Thus the Internet has made sharp inroads into Nigerian society. Its very sizeable impact and potential for societal change has made it the centre of a tussle between very powerful interests in the private sector and government. This tussle has had important ramifications for the ability of ordinary Nigerians to use the Internet in the many ways they do, without interference from these powerful private and political interests.

This is the thrust of Internet freedom and the focus of this report. The Status of Internet Freedom in Nigeria report 2018 builds on the 2016 report to examine how the vortex of commercial and political interests have worked to shape the space around surveillance, privacy, freedom of expression, data protection and other digital rights in Nigeria.

The report coverage period is from 2017 - 2018.

To give clarity on the range of what digital rights might entail, it is worthy of note that at the 32nd session of the United Nations Human Rights Council of June 2016[1], the Council (with Nigeria in attendance) passed a resolution on the "promotion, protection and enjoyment of human rights on the Internet" stating unequivocally that:

> " *…. the same rights that people have offline must also be protected online, in particular freedom of expression, which is applicable regardless of frontiers and through any media of one's choice, in accordance with articles 19 of the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights.* "

The Status of Internet Freedom in Nigeria report 2018 examines the laws, policies and actions of government and the private sector which have determined the extent of the freedoms Nigerians enjoy online.

Nigeria: Country Context

With a population of about 198 million[2], Nigeria is Africa's most populous country and accounts for about 16% of Africa's population. With a Gross Domestic Product (GDP) of $404.6 billion[3], Nigeria is also Africa's largest economy. However, Nigeria's population strength and economy size masks severe developmental challenges. Gross National Income (GNI) per capita is $2459, and according to the United Nations Development Programme (UNDP), poverty rate is 62.6% while life expectancy at birth is 52.3[4] years. In the UNDP's Human Development Reports[5], with a Human Development Index of 0.527, Nigeria is ranked 152 out of 188 UN member states.

Nigeria's Gini coefficient, a measure of income inequality, is 48.8[6]. According to the UNDP, the Gini Coefficient is a "measure of the deviation of the distribution of income among individuals or households within a country from a perfectly equal distribution. A value of 0 represents absolute equality, a value of 100 absolute inequality".

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[1] The United Nations Human Rights Council (UNHCR) Resolution". A/HRC/32/L.20, June 27, 2017. https://www.article19.org/data/files/Internet_Statement_Adopted.pdf
[2] National Population Commission, Nigeria http://population.gov.ng/
[3] GDP in Current US dollars, Nigeria (2016), http://www.data.worldbank.org/en/country/nigeria
[4] UNDP Nigeria, http://www.ng.undp.org/content/nigeria/en/home/countryinfo/
[5] UNDP Human Development Reports, Nigeria, http://hdr.undp.org/en/countries/profiles/NGA
[6] Ibid, Income Gini Coefficient (2013)

Politically, Nigeria has been a relatively stable democracy since the return of civil rule to the country in 1999. Prior to this, Nigeria had been under military rule marked by clampdown on freedom of expression and other human rights for 30 years.

A first civilian to civilian political transition in 2015 was a watershed moment in Nigeria's history, and Nigeria's political terrain is characterized by 68 political parties catering for the interests of Nigeria's over 250 ethnic groups, including the biggest three ethnic groups - the Yoruba, Igbo and Hausa-Fulani.

State of Access in Nigeria

Nigeria's has a competitive telecommunications market, with MTN, Globacom, Airtel and 9mobile as the major and largest telcos (in order of listing) in operation, offering voice and data services. The Nigerian telecommunications industry is regulated by the Nigerian Communications Commission (NCC), an agency under the Ministry of Communications. Also, the National Information Technology Development Agency, also under the Communications Ministry, according to its website, was created "to implement the National Information Technology Policy and to co-ordinate general IT development in the Nigeria"[7].

For the majority of Nigerians, access to telecommunications services is through Global System for Mobile Communications - GSM (99.2%). Access via CDMA (0.3%), fixed wired/fixed wireless (0.13%) and VoIP (0.46%), according to NCC data reaches less than 1 million Nigerians[8].

The latest International Telecommunications Union data on Nigeria places Internet penetration at 25.7%[9]. Nigeria's Internet access is facilitated by offshore submarine cables bringing broadband access to landing points on the Nigerian coast. These cables include MainOne cable, West Africa cable system and Glo-1 submarine communications cable. Although these cables serve the main telecommunications companies, the lack of a well-developed national backbone infrastructure has limited the successful inward outlay of this infrastructure.

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[7] National Information Technology Development Agency. http://nitda.gov.ng/about-nitda/
[8] Nigeria Communications Commission, Industry Statistics: Subscriber/Operator data. https://www.ncc.gov.ng/stakeholder/statistics-reports/industry-overview#cdma
[9] "Country ICT Data", International Telecommunications Union (2016). https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Systemic challenges such as 'Right-of-Way' charges have limited investment in expanding fibre access further inland into the Nigerian hinterland and has restricted fixed wired and fixed wireless access to the Internet in Nigeria to 0.13%. This implies that less than 1% of Nigeria's 198 million population gets to enjoy the reliability and quality of service afforded by fixed broadband access.

The majority of Nigerians are served by what service providers describe as "mobile broadband" - which in the experience of many Nigerians, is broadband only in name alone. Average connectivity speeds in Nigeria is put at 3.85 mbps and average peak connection speed is 29 mbps[10].

Poor quality of service has marred the Internet experience in Nigeria. In rural areas however where perhaps needs are more basic, the major challenge has been one of access, because of the concentration of GSM investment in urban areas and a lack of adequate investment in dispersed, sparsely populated rural areas where telecommunications providers do not see a market. However, some progress has been made using Nigeria's Universal Service Provision Fund to expand access to parts of rural Nigeria. Nigeria's broadband plan, dated till 2018, needs urgent revision to drive national development.

The last Nigerian Communications Commission (NCC) customer satisfaction survey in 2012 suggested a less than enthusiastic perspective of the quality of service offered[11] by Nigeria's service providers. There seems to be a need for an updated survey which accurately reflects the current views of customers.

Women in Nigeria also face an access challenge, in relation to men. A World Wide Web foundation study showed that poor urban women in the developing world were 50% less likely to access the Internet than men[12]. Lagos, Nigeria's commercial capital was one of the cities in the global south where this study was conducted.

Another aspect of the challenge of access in Nigeria is the cost of data. In recent years, the cost of data has emerged as a barrier to access for millions of Nigerians.

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[10] Akamai, "Internet Connection Speeds and Adoption Rates by Geography".
   https://www.akamai.com/uk/en/about/our-thinking/state-of-the-internet-report/
   state-of-the-internet-connectivity-visualization.jsp
[11] Nigerian Communications Commission Nigeria Consumer Satisfaction Survey Final Report Part 2: Data Analysis, November 2012.
   https://www.ncc.gov.ng/documents/368-nigeria-consumer-satisfaction-survey-data-analysis/file
[12] "Women's Rights Online: Translating Access into Empowerment
   http://webfoundation.org/docs/2015/10/womens-rights-online_Report.pdf

The Alliance for Affordable Internet (A4AI), a global coalition working for affordable broadband access, has estimated that the cost of 1 gigabyte of pre-paid mobile phone data in Nigeria represents 8% of Gross National Income (GNI) per capita[13]. The benchmark for affordable Internet access is now being widely accepted globally, including by organizations such as the Broadband Commission as the cost of 1 gigabyte of data representing 2% or less of Gross National Income per capita. It is hoped that better policy implementation in areas such as infrastructure sharing and spectrum allocation will make broadband Internet access more affordable for Nigeria.

Methodology

The research underpinning the Status of Internet Freedom in Nigeria Report 2018 engages a mixed methods methodology, involving qualitative and quantitative methods. The qualitative methods include desk research/document analysis, legal research and in-depth interviews with stakeholders in the digital rights community in Nigeria.

Quantitative methods employed include a poll on the Nigerian public perception on freedom of expression[14] and technical measurements on websites, apps and internet services in Nigeria for evidence of censorship. The technical measurements were conducted in collaboration with our partners, The Open Observatory of Network Interference (OONI).

We believe this approach deepens the report and amplifies its impact in a subject so pertinent for the development of a free and open society in Nigeria.

Global Trends in Internet Freedom and Digital Rights

Since the publication of the last edition of our Status of Internet freedom in Nigeria report in 2016[15], a number of themes have dominated global discourse on Internet freedom, with varying degrees of influence on Internet freedom in Nigeria.

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[13] Alliance for Affordable Internet (A4AI) Affordability Report 2017 Nigeria Report
     https://bit.ly/2LhBTcj
[14] This was a non-representative Twitter poll hosted on Paradigm Initiative's Twitter account asking the question, "*Do you feel free to express yourself on social media in Nigeria?*"
[15] Okunoye B and Ilori T (2016). "State of the Nation: Status of Internet Freedom in Nigeria".
     https://bit.ly/2xJeFJV

For instance although Internet disruptions were prevalent between January 2017 and March 2018 with at least 12 incidents of Internet disruptions occurring in 10 African nations alone, this concern did not manifest in Nigeria. Instead, the most important global trends which were replicated in Nigeria included the rush by governments around the world to pass legislation hurting Internet freedom, increased attacks against the press and concerns around data privacy.

In the intervening period, a number of significant legislation and policies which threaten Internet freedom were introduced in Nigeria, with various degrees of success. These include the Anti-Terrorism bill and Hate Speech bill. Also, this period also witnessed a massive clampdown on online journalists in Nigeria, like never witnessed before. Prior to this time, ordinary citizens had typically borne the brunt of arrests for comments made online.

Furthermore, as the May 2018 deadline for the implementation of the European Union's General Data Protection Regulation (GDPR) drew nearer, concerns about data privacy also grabbed global headlines with the Cambridge Analytica scandal, where the personal data of millions of Facebook were harvested without their consent for political ends[16]. There is also a parallel concern for Nigeria, because Nigeria's 2015 elections was mentioned as one of the election campaigns conducted with Cambridge Analytica's involvement[17]. Concerns over data privacy around Nigeria's elections are not new, given the outcry that trailed the release of sensitive voters data via the site voters.ng in 2016[18].

16   Kozlowska H, Gershgon D and Todd S (2018). "The Cambridge Analytica Scandal is wildly confusing: this timeline will help". Quartz, March 29 2018.
     https://bit.ly/2GYZcGU
17   Kazeem Y (2018). "Cambridge Analytica tried to sway Nigeria's last elections with Buhari's hacked email" Quartz Africa, March 22, 2018.
     https://bit.ly/2GtCJ7U
18   Group wants INEC to explain how it handles Nigerian voters' data. Premium times, September 21 2016.
     https://bit.ly/2GMRYIp

State of Internet Freedom in Nigeria

Privacy and Surveillance

A number of critical developments have occurred since 2016, when our last report was published. Although our work in Nigeria had always revealed the surveillance capabilities of state and other actors, in the past 2 years it would seem the hidden reality digital rights activists have had to deeply investigate in order to reveal - the covert world of actors within the surveillance space, have shrugged off their cloak of secrecy.

Within the past 12 months for instance, both the Federal government[19] and the Nigeria military[20] have publicly announced their intention to monitor the activities of Nigerians on social media. Also, news reports had emerged revealing a government sponsored surveillance programme on mobile phones in Abuja the nation's capital city[21].

When two communications satellites with suspected mass surveillance capabilities were launched into orbit by the Federal government[22], this completed a ring of state sponsored surveillance activities. This increased surveillance activity of government is reflected in the 2016 and 2017 budgetary allocations for the purchase of surveillance equipment by the Federal Government.

The budgetary allocations to the Department of State Security (DSS), National Intelligence Agency (NIA) and the Office of the National Security Adviser (NSA) for a range of surveillance equipment spiked from over N29 billion naira in 2016 to over N45 billion in 2017[23].

[19] Wakili S, "Why we want to monitor social media accounts of prominent Nigerians
— FG", Daily Trust, January 25, 2018.
https://bit.ly/2rpQASR
[20] "Former governor supports monitoring of social media by military", The Guardian, September 3 2017.
https://bit.ly/2K2Xt3D
[21] Akuki A, "DSS Bugs 70% Of Mobile Phones In Abuja", Independent, November 8, 2017.
https://bit.ly/2jaTJVi
[22] Martins O, "FG sued for alleged spying on Nigerians with satellites", The Nation Online, June 22 2017.
https://bit.ly/2Ih48dh
[23] Ilori T (2017), "Status of Surveillance in Nigeria: Refocusing the Search Beams,
Paradigm Initiative Policy Brief
https://bit.ly/2kPk7BJ

The 2018 budgetary allocation proposal for Nigeria's security services[24] included items such as "Social Media Mining Suite" and "Surveillance drone with Precision Camera and IMSI Payload capabilities". The "Social media mining suite" probably gives the government the capability to carry out their stated intention of monitoring the social media activities of Nigerians. Also very worrisome is the item "Surveillance drone with IMSI Payload capabilities. An IMSI device gives capabilities for indiscriminate and widespread surveillance of mobile phone traffic within a coverage area.

Furthermore, the mass publication of the information of Nigerian voters entrusted to the Independent National Electoral Commission (INEC) on the website voters.ng in late 2016[25] perhaps reveals the state of the data management of private citizens' data in Nigeria. Nigeria currently has no data protection law, although section 37 of the Constitution guarantees the privacy of citizens' correspondence and can hence be relied on for the enforcement of same.

There are genuine fears by civil society that in view of the large amounts of data of Nigerians in the possession of the National Identity Management Company (NIMC), the type of data breach exemplified by the voters.ng saga might become more frequent, and even worse, unreported. It is hoped however that the 'Data Protection bill' and 'Digital Rights and Freedom Bill', both with varying degree of progress within Nigeria's legislative system, will eventually become laws and offer data protection cover for Nigerians.

The Data Protection Bill provides against the unlawful obtaining and disclosure of personal data. It addresses the appropriate handling of data and other data privacy issues such as right of access to personal data and right to prevent processing of data for the purpose of direct marketing.

The Digital Rights and Freedom Bill, drafted by a coalition of civil society, private sector and government actors, has more comprehensive data protection provisions, and at the moment only requires Presidential assent to become law. One of the main objectives of this Bill is to guarantee the fundamental privacy rights of citizens and define the legal framework regarding surveillance. It expressly prohibits unlawful and unauthorized interference with the online privacy of any person and provides a structure for authorized access to private data which involves the judiciary.

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[24] 2018 Budget: Budget Office of the Federation"
https://bit.ly/2Il8qjK
[25] The website was quickly taken down following a protest by civil society groups.

Additionally, the integrity and confidentiality of personal data of individuals stored by intermediaries is guaranteed to be inviolable. While the Bill guarantees ownership of all online content by the creators of those content, it also provides for compensation in the event of a violation of the privacy rights of these owners by third parties. Furthermore, the Bill expressly provides that mass or indiscriminate surveillance of the people and the monitoring of their communications shall not be carried out.

It requires a standard of transparency from the state in its use and scope of communications surveillance policies, regulations, activities and powers of authorities. For instance, any lawful interference with privacy rights is required to be properly published in a Gazette and the subject of such interference is to be specifically notified of this fact within 7 days of the completion of the interference. In fact, the State by this bill, is required to enlighten and educate individuals to enable them fully comprehend the scope and application of the laws permitting communications surveillance. Even further, the Bill provides for the protection of privacy of students and learners regardless of whether learning takes place in a brick-and-mortar institution or online.

Some of the legislation which empower privacy and surveillance breaches in Nigeria include section 38 of the Cybercrimes Act, which gives law enforcement agents unrestricted access to the database of ISPs; and the Draft lawful Interception of Communications Regulation of the Nigerian Communications Commission (NCC), which grants the NCC broad unsupervised powers of intercept of communications and storage of data from Telecommunication companies. The draft regulation provides that the interception of any Communication by any person shall be lawful where one of the parties to the Communication has consented to the interception, provided that an incontrovertible proof of such consent is available.

In other words, communication between a number of parties may be lawfully intercepted if only one party to the communication consents to its interception. Hence, if there is a conference call of any number of persons, an interception of all of that communication is lawful if only one participant in that call consents to it. Furthermore, it also provides that the interception of any Communication by any person is lawful where the intended recipient of that Communication has consented to the interception by another party, provided that proof of such consent is available. Even more ridiculous is that these two forms of 'lawful' interception are envisaged to be without warrant. Hence, there is not only the provision for derogation from a personal right of privacy, but it is to be without checks and balances.

Additionally, the Draft Regulation directly addresses licensees[26] of the Nigerian Communication Commission in some of its clauses. A notably striking provision is one which provides that every licensee is to take steps (as the NCC may by way of notice direct from time to time), to install interception capabilities that allow or permit the interception of Communications. It will therefore be a condition for either the withdrawal or the grant of licence, should it become a live Regulation. In fact, the Draft Regulation provides that this instruction is to be regarded as a duty on the licensee, on which if not carried out, will give the NCC the right to seek a judicial remedy of specific performance, injunction or other relevant remedies.

This duty of installation also extends to periodic updates and upgrades of the equipment or software as NCC may direct. Apart from the obvious damage and abuse that this provision may occasion, what is also most troubling about it is the absence of an independent body to determine what technology will be required of the licensee to install/upgrade. It's simply the NCC giving the licensees a take-it-or-leave it command to integrate a take-it-or-leave-it technology. To show the intentionality of this provision, a separate provision is made excluding any law in force to the contrary. It says that notwithstanding any law in force, no licensee shall provide any Communication Service which does not have the capacity to be monitored and intercepted.

Furthermore, the Draft Regulation envisions encrypted communication (which is obviously made for the purpose of privacy). It says that when the intercepted communication is an encrypted one, the licensee shall provide the key, code or access to the National Security Adviser and the State Security Service. While all of these provisions may be relevant and useful for an emergency or a public security scenario, one cannot but worry at the leeway provided for interception without warrant by any person provided one party to the communication/the intended recipient consents. The Draft Regulation obviously provides for a penalty for non-compliance which is N5,000,000 (approx. $12,500USD).

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[26] any person, body or organization which provides a Communication service in accordance with the licence issued to such a person by the Commission

The Draft Regulation further provides that if anyone is aggrieved by an interception activity, they may place a formal complaint to the NCC or seek judicial review in court. However, such intercepted communication is to subsist and remain in force until an express decision against that is made by the court. It is safe to assume that both draftsman and reader are aware of the protracted judicial process in Nigeria.

Content Blocking

In October 2017, relying on section 146 of the Nigerian Communications Commission Act, 2013, for the first time in the history of the nation, the National Communications Commission (NCC) reportedly ordered the blocking of 21 websites in the country.

In response, for this report, Paradigm Initiative worked with partners The Open Observatory of Network Interference (OONI) to conduct technical testing of not just the banned websites, but also of other websites and apps of interest in the country to collect evidence of censorship. OONI Probe network measurements have been collected from ISPs in Nigeria since May 2014, and continue to be collected on an ongoing basis to this date. All such data is publicly available via the following resources:

- OONI Explorer
- OONI API

Testing websites

OONI's Web Connectivity test is designed to measure whether access to websites is blocked by means of DNS tampering, TCP/IP blocking, or by a transparent HTTP proxy.

Most Web Connectivity measurements in Nigeria have been collected from mobile networks, primarily testing the websites included in the Citizen Lab's global test list. OONI data shows that most websites tested in Nigeria over the last year have been accessible.

In November 2017, however, Paradigm Initiative reported that Naij, a popular news outlet, and twenty other websites were blocked. Following this report, OONI shared an OONI Run link on social media, encouraging locals in Nigeria to test those sites. Out of the 21 websites Paradigm Initiative reported to be blocked, only 17 of them were tested (excluding biafra.net, biafra.com, biafra.club, and restoringbiafranationhood.info).

Biafraforum.com was found to be accessible, while the following 16 sites were found to be blocked by means of DNS tampering in November 2017:

- Naij.com
- Igbofocus.co.uk
- Ipobgovernment.org
- Biafraland.com
- Biafraradio.com
- Biafranet.com
- Biafrastars.co
- Biafrainc.com
- Gobiafra.com
- Biafra.info
- Biafranigeriaworld.com
- Ekwenche.org
- Ustream.tv/channel/biafra-television
- Biafrasay.com
- Bafmembers.com
- Thebiafrapost.com

OONI data (linked above) corroborates our report on the blocking of those websites. It's worth highlighting though that the above sites were only tested once on 22nd November 2017 on the MTN (AS29465) network.

Domains	Globacom (AS37148)	MTN (AS29465)	Airtel (AS36873)
naij.com	Accessible	Accessible	Accessible
igbofocus.co.uk	TCP/IP blocking	DNS blocking	HTTP blocking
ipobgovernment.org	TCP/IP blocking	DNS blocking	HTTP blocking
biafraland.com	N/A	DNS blocking	HTTP blocking
biafraradio.com	N/A	DNS blocking	HTTP blocking
biafranet.com	TCP/IP blocking	DNS blocking	HTTP blocking
thebiafrastars.co	TCP/IP blocking	DNS blocking	HTTP blocking
biafrainc.com	Generic timeout error	DNS blocking	HTTP blocking
gobiafra.com	TCP/IP blocking	DNS blocking	HTTP blocking
biafra.info	TCP/IP blocking	DNS blocking	HTTP blocking
biafranigeriaworld.com	TCP/IP blocking	DNS blocking	HTTP blocking
ekwenche.org	TCP/IP blocking	DNS blocking	HTTP blocking
ustream.tv/channel/bi-afra-television	TCP/IP blocking	DNS blocking	Accessible

biafrasay.com	TCP/IP blocking	DNS blocking	N/A
bafmembers.com	TCP/IP blocking	DNS blocking	Accessible
thebiafrapost.com	DNS lookup error	DNS blocking	Generic timeout error
biafraforum.com	TCP/IP blocking	Connection error	HTTP blocking
biafra.net	N/A	DNS blocking	HTTP blocking
biafra.com	TCP/IP blocking	DNS blocking	HTTP blocking
biafra.club	N/A	DNS blocking	HTTP blocking
restoringbiafranationhood.info	Accessible	Accessible	N/A

Table 1: Blocked websites in Nigeria showing blocking mechanisms by ISPs.

News outlet naij.com no longer appears to be blocked. OONI measurements collected in April 2018 show that the news website was accessible from (at least) three local vantage points. Biafraforum.com, on the other hand, was previously found to be accessible in November 2017, but recent measurements from April 2018 show that it is blocked by two ISPs. It remains unclear though when the block was lifted and enforced for these sites, since they weren't tested between 22nd November 2017 to 24th April 2018.

Recent measurements involve the testing of four sites (biafra.net, biafra.com, biafra.club, and restoringbiafranationhood.info) that weren't previously tested in November 2017, but which Paradigm Initiative reported to be blocked. Three of those sites (biafra.com, biafra.net, biafra.club) were found to be blocked in April 2018, suggesting that they may have been blocked since November 2017 (when ISPs reportedly started blocking sites associated with Biafra). Recent testing of restoringbiafranationhood.info, on the other hand, shows that the site was accessible in two networks in April 2018.

What's noteworthy from the above table is that Nigerian ISPs appear to be quite consistent in the types of censorship techniques that they adopt.

Globacom appears to primarily be blocking sites by means of TCP/IP blocking, MTN by means of DNS tampering, and Airtel always appears to be blocking sites at the HTTP layer. The measurements that show "generic timeout errors", "DNS lookup errors" and "connection errors" present signs of network anomalies, but do not necessarily serve as evidence of internet censorship, since they may have occurred due to transient network failures. While Globacom, MTN, and Airtel appear to consistently block the same sites on the same dates, it's worth noting that Airtel did not block two sites (ustream.tv and bafmembers.com) that appear to have been blocked by Globacom and MTN.

Another interesting pattern that we see in the measurements is that Nigerian ISPs appear to be using reserved (and historically unrouted) IP addresses, such as 192.0.0.1 and 1.1.1.1, as the spoofed DNS response. This technique seems to be used by MTN, which resolves blocked domains to 192.0.0.1, and by Airtel, which resolves blocked domains to 1.1.1.1. This could be due to the fact that resolving blocked domains with unrouted IP addresses leads to clients not generating any extra traffic (and potentially overloading their network) when accessing blocked domains. It's worth noting, however, that the 1.1.1.1 IP address is actually no longer an unrouted IP address and is now being used for the CloudFlare DNS resolver.

Block pages are essential for confirming censorship events with absolute accuracy. Given that Nigerian ISPs do not appear to serve block pages (at least for none of the tested websites), our confidence in confirming the potential censorship events outlined in the above table is quite limited.

When blockpages are not served, OONI relies on analyzing large volumes of network measurements collected over an extended period of time (to identify whether censorship patterns are persistent and to better rule out false positives).
The latest measurements, however, were collected on 25th April 2018, while the sites that were initially identified as blocked in November 2017 weren't tested in the interim leading up to 24th April 2018, limiting our ability to identify censorship changes.

Nonetheless, the measurements collected for the testing of the 21 sites strongly suggest that many of them have been blocked, primarily due to the following reasons:

- **Only (20 out of 21) sites that have been reported to be blocked present signs of network interference.** All other tested websites (including provocative or objectionable sites) were found to be accessible.
- **These sites presented signs of network interference across three ISPs, not just one.** This helps rule out the hypothesis that the anomalies could have occurred due to an unreliable network.
- **The types of network anomalies (TCP/IP blocking, DNS tampering, HTTP blocking) were (mostly) consistent per ISP, suggesting that specific censorship techniques were adopted.** If the network anomalies had occurred due to transient network failures, DNS misconfiguration, or other reasons, they probably wouldn't persist in the same way.

Out of the 21 sites reported to be blocked, almost all of them are associated with content on the secession agitations for Biafra in Eastern Nigeria.

What's interesting is that (excluding restoringbiafranationhood.info, which is no longer operational anyway) news outlet naij.com is the only site that currently appears to be accessible, while all other sites (which are associated to Biafra) appear to be blocked (and may have remained that way since November 2017).

Testing instant messaging apps

Recent measurements from the last months show that popular instant messaging apps were accessible in the country. These measurements were collected through OONI's WhatsApp, Facebook Messenger, and Telegram tests which measure the reachability of these apps.

All WhatsApp measurements show that the app has been accessible in the following networks in Nigeria: Swift Networks Limited (AS36923), Globacom Limited (AS37148), MTN (AS29465), Airtel (AS36873), Spectranet Limited (AS37340), Natcom (AS327952), Futurecom Limited (AS37377).

Similarly, all Facebook Messenger measurements show that the app has been accessible in the following networks: Swift Networks Limited (AS36923), Airtel (AS36873), MTN (AS29465), Spectranet Limited (AS37340), Natcom (AS327952), Globacom Limited (AS37148), Futurecom Limited (AS37377).

Telegram was also found to be accessible in the following networks: Airtel (AS36873), MTN (AS29465), Spectranet Limited (AS37340), Natcom (AS327952), Globacom Limited (AS37148), EMTS (AS37076).

It's worth noting that these findings are limited to the specific networks where tests were run, as well as to the dates and time of testing. As a result, it remains unclear if any of these instant messaging apps were blocked by different ISPs in Nigeria, and/or if they were blocked in different moments in time when tests weren't run.

Testing circumvention tools

Popular circumvention tool sites (such as ultrasurf.us, hotspotshield.com, and tor-project.org) were found to be accessible in Nigeria throughout the testing period.

OONI's Vanila Tor test is designed to measure the blocking of the Tor network. This test has only been run once in Nigeria (in June 2017) and the collected data shows that the Tor network was accessible in the country. This is also suggested through Tor Metrics which show relatively stable connections to the Tor network from Nigeria over the last year, as illustrated in the graph below.
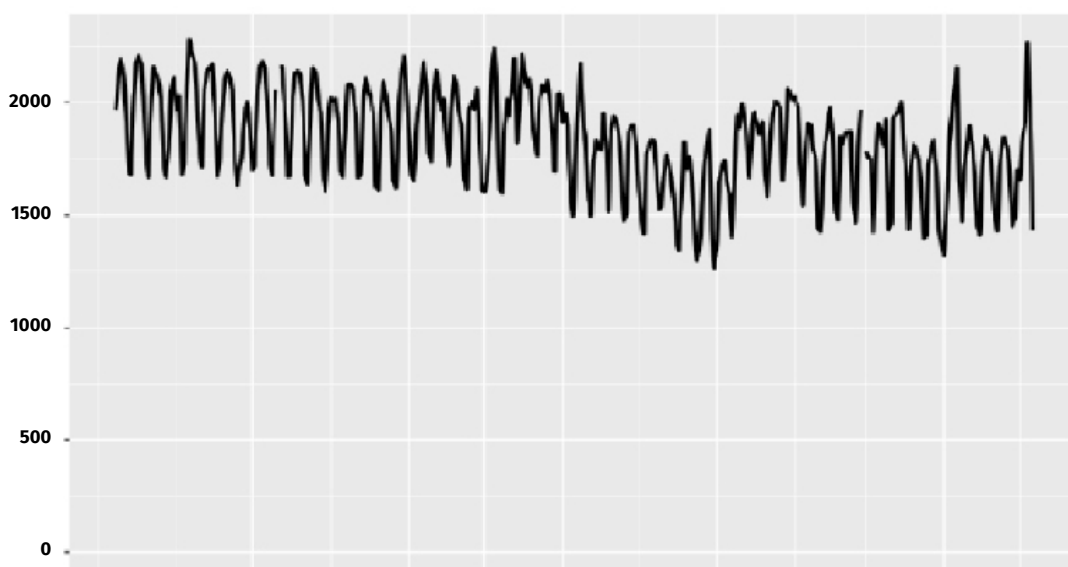
Directly Connecting Users from Nigeria

Figure 1: Connections to the Tor Network from Nigeria. Source: Tor Metrics

Freedom of Expression and Arrests of Citizens

From April 4 – 11 2018, Paradigm Initiative hosted a poll[27] on our official Twitter handle asking the simple question, "Do you feel free to express yourself on social media in Nigeria?" There were 2,294 respondents, with 47% responding "Yes", 40% "No" and 13% responding "I don't know".

Although the population sample was not random, the relatively large proportion of respondents who said they don't feel free to express themselves (40%) is perhaps symptomatic of the developing situation in Nigeria where the arrests of ordinary citizens, journalists, activists and bloggers have become commonplace in the past 3 years.

The additional 13% who responded "I don't know" is also a cause for concern. Their response suggests they are either not aware of the threats to freedom of expression which have developed in the country within the past 2 years; or perhaps their response is even a tacit admission that they don't feel *completely free* to express themselves on social media in Nigeria.

Figure 2: Paradigm Initiative Freedom of Expression Poll 2018

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[27] This was a non-random, non-representative poll accessible only to a segment of Nigeria's Twitter users.

Between January 2016 and April 2018, at least 24 citizens, activists, journalists and bloggers have either been arrested or arraigned before courts for comments made online.

The legislation which has typically been used to authorize these arrests is the Cybercrime Act of 2015, particularly Section 24. Within the past twelve months however, the government has advanced the Terrorism Amendment Act and Hate Speech (Prohibition) bill as possible new legislative backing for prosecuting freedom of expression in the country.

Buoyed by the war against terrorist activity in North East Nigeria and secessionist movements in the South East (which revived ethnic rivalries on social media), although these legislation were developed to tackle these problems, they offer fresh arsenal in the hands of those who want to chill freedom of expression through clauses which potentially could be used to prosecute comments made online.
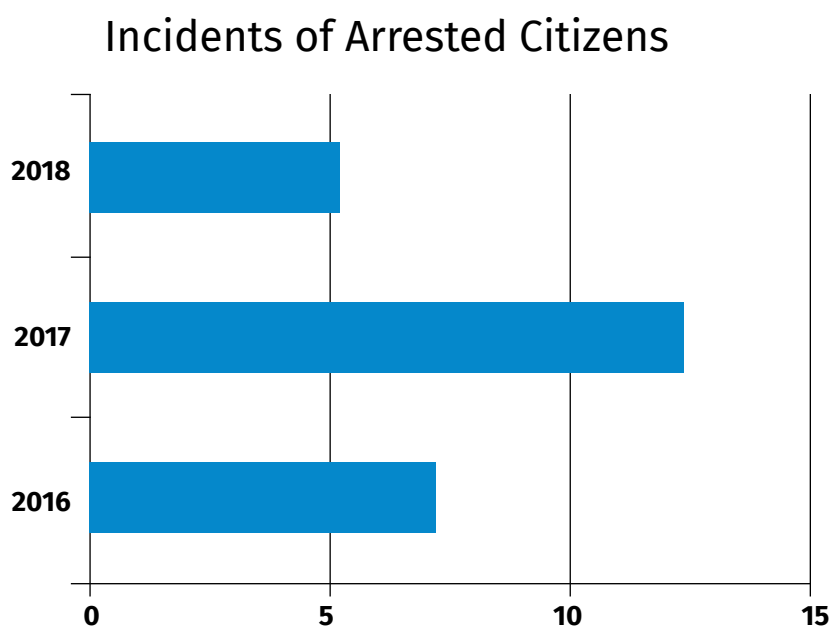
Incidents of Arrested Citizens

Figure 3: Arrests of Citizens for Comments made online in Nigeria, January 2016 - April 2018

Another aspect of restrictions to freedom of expression recently observed in Nigeria is the jamming of telecommunications signals around the entourage of Nigeria's political elite, and mandatory SIM card registrations in Nigeria.

The jamming of telecommunications signals around events where Nigeria's political elite congregate have somewhat become commonplace in Nigeria[28], and the country regrettably is among the many African nations with mandatory SIM registration policies without having a data protection legislation in place.

Emerging Threats as Nigeria nears General Elections 2019

Never had the Internet played a crucial role in Nigeria's national elections as it did in 2015 where Nigeria experienced a civilian to civilian transition for the first time. Social media played a crucial role in election monitoring and reporting across the nation, which was instrumental in the successful democratic outcome.

However, a lot has happened within the past 3 years since the last elections. As documented in the report, the Nigerian government has put its sights on social media, and government's stated policies and budgetary allocations for social media monitoring equipment raises fears of social media censoring ahead of the 2019 elections possibly under such guises of countering hate speech and fake news.

Status of Internet Freedom in Nigeria: Partially Free

The evidence from Nigeria within the past two years since our last report was published suggests that while Nigeria has not descended to the repressive depths of countries like Ethiopia and Egypt on digital rights and Internet freedom in Africa, we are not quite far from it, given the range of attacks on digital rights documented in this report.

For those who might consider this assertion far-fetched, consider the statements and posturing towards social media by senior government officials, who have become the first in Nigeria's history to implement website takedowns as observed in October 2017. What they might also pioneer in the near future is also up for guess and a subject of conjecture.

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[28] AKWA IBOM: Who Is Jamming Internet Signals During Football Matches?",
Techeconomy, November 13 2017.
https://bit.ly/2whlvFO

Conclusion & Recommendations

Nigeria has the largest population and number of Internet users in Africa[29], while the Internet has become an important medium permeating every sector of national life. However, Internet penetration and broadband penetration remains relatively low, and should become points of renewed focus as Nigeria seeks to review its broadband plan (2013 - 2018). As it was highlighted in the Internet Freedom Forum hosted by Paradigm Initiative in April 2018, conversations about digital rights and Internet freedom are only useful when there is access to the Internet and all things digital. Also important is what Nigerians actually use the Internet for, because more digitally educated citizens are more likely to use the Internet more profitably. There is a big opportunity here for civil society to lead the way in societal education on how the Internet can be used in a balanced and profitable way for individual and community development.

An immediate priority going forward is the passage of a law on data privacy in Nigeria. It is hoped that the President signs the Digital Rights and Freedom Bill, which has strong provisions for data privacy and other digital rights into law. We also hope that the Data Privacy bill, under consideration by the Nigerian Senate, also becomes law. With the European Union General Data Protection Regulation (GDPR) coming into force in May 2018, strong national protections for data is now an international prerequisite for life and business in the digital age.

The 2019 General elections in Nigeria might perhaps place the greatest strain on digital rights in the country within the next 12 months. Although numerous civil society campaigns are already ongoing to educate Nigerians on the need to verify information before reposting on social media, in addition to public enlightenment campaigns against hate speech, the current posture of government seems critical of social media and there is apprehension among civil society social media gags may be implemented using the thinnest of pretexts.

Despite the aforementioned challenges to digital rights in Nigeria, Nigeria remains one of the most open spaces for digital rights in Africa. This however might just be a reflection of the dim environment around digital rights in other parts of the continent. Nevertheless, civil society, the private sector and policy makers must continue to work together, as they have done so far in ensuring that the Internet remains open in Nigeria, and digital rights upheld.

[29]　International Telecommunications Union,
https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

Acknowledgments

The Paradigm Initiative and Open Observatory of Network Interference team: