The arrival of Over-the-Top (OTT) players creates numerous challenges for telecom operators in Africa, cannibalizing their voice and SMS revenues while increasing video traffic on the 3G/4G networks at a time when operators need to invest in infrastructure.

Given this, the actors (telecom operators, governments, regulators and the OTT players) face a range of questions:

- What is the extent of the OTT threat to African telecom operators?
- How do regulators address the regulation of OTT players on other continents?
- What levers can enable operators to protect their revenue and margins?
- How should relations between the OTT players and operators evolve in Africa?
- What should African states and regulators do to promote the necessary investment efforts in 3G/4G networks and fiber optics?
OTT PLAYERS: A GROWING SEGMENT CHALLENGING TELECOM OPERATORS

The dash for OTT services has led to the creation of groups that are, at times, eclipsing the traditional telecom operators. OTT players include both actors in communications services (WhatsApp, Skype or Viber) as well as audio and video (Netflix, Deezer, YouTube).

While their arrival in Africa is inevitable, it poses challenges to telecom operators, and to the authorities and regulators, at a time when African operators need to invest in 3G/4G and optical fibers, and manage a transition in their revenue model from voice to data services.

If regulators might be tempted to block or limit such services, these measures can only be temporary, and they will have to find other measures to support the telecom operators (for example, tax incentives, etc.). Relations between operators and OTT players, and also with infrastructure investors, will progressively become less confrontational and more inclined to partnership as operators migrate their revenue models towards data; a similar picture to that seen today in advanced countries.

OTT AND INTERNET PLAYERS
Strictly speaking, most Internet services are OTT services, in that they use the telecom operators’ networks and bring value to users, but without the telecom operators being involved in the development, sale or provision of these services to customers, and consequently, without generation of revenue for them. Potentially, then, this is an issue for all Internet players, as shown in the diagram below. We will use a more limited definition of OTT services, defined as being those having a significant impact on the economics of telecom operators:

/ Over IP (Internet Protocol) communication services such as VoIP, instant messages (e.g., those provided by Skype, Viber, WhatsApp, and Facebook). These services are in direct competition with the services of telecom operators: voice, SMS, MMS, etc.
/ Audio and video services which put heavy pressure on the volumes of data carried over the networks, requiring investment in infrastructure by the telecom operators at a level that can cope with the dramatic growth in data traffic (particularly due expanding video services).

A MASSIVE USER BASE
The actors providing these OTT services are the US Internet groups known as “GAFA” (Google, Apple, Amazon, and Facebook), but also players from other continents, like the Chinese Youku, the Israeli Viber, and the French Dailymotion.

In terms of the audiovisual landscape, the video hosting website, Youtube, (owned by Google) can now count on some one billion users (since May 2013), maintaining its status as the undisputed leader. In second place is the global audiovisual OTT player, Youku, with more than 256 million unique visitors every month, making it the leading online video platform in China.

WhatsApp, for its part, is the big winner in OTT communications with its 990 million users, followed by its parent group’s application, Facebook Messenger (with 800 million users), and then Viber (610 million users).

OTT and internet players

INTERNET PLAYERS
PORTALS
Google
Yahoo!
Bing
Yandex
Baidu

MERCHANTS
Jumia
Amazon
Zando
Konga
Takealot
Cdiscount
Tisu
Alibaba

INTERMEDIARIES
Airbnb
Tripadvisor
Uber
Freelancer
Booking
BlaBlaCar

AUDIO/VIDEO
Netflix
YouTube
Vimeo
Deezer
Dailymotion
Spotify

COMMUNICATIONS
Telegram
WhatsApp
KakaoTalk
Viber
Messenger
Wechat
Skype
Tencent
OTT services are used by more than a third of the world’s population and are growing rapidly, as a result of them offering a number of advantages over the services of telecom operators:

/ The absence of borders: OTT players can easily offer their services across a number of countries while, by design, telecom operators are linked to the country they operate in.

/ Multi-devices: OTT services can also easily be accessed from a computer, smartphone or tablet via apps, while the services of the mobile operators, such as SMS and MMS, have been “built” to run on mobile only.

/ The price, and richer functionality: The OTT players’ free communication services compete directly with the operators’ voice and SMS services, but also offer new features (accessibility on different devices, a simplified customer experience, rapid exchange of messages, rich communications including voice, and message, photo, and video, in a fluid and simple manner).

/ The major paradox is that the quality of voice communications is often better via an OTT service than using a paid-for voice service on 2G networks. In the late 2010s, it was therefore possible to have free voice communications,
in high definition, on Viber or Skype and pay dearly for the same virtually inaudible and regularly cut-off international conversation on a 2G network... the challenge is far from being about tariff only.

**OTT PLAYERS PRESENT A PICTURE THAT MARKETS CONSIDER ATTRACTIVE**

Dynamic growth and high capitalization

The business models of OTT players are compelling for investors: the capitalizations of the biggest Internet actors are well above those of the telecom operators. While the market values of the two largest...
global operators, China Mobile and Verizon, amounted to $250 and $174 billion respectively, in October 2015, those of Apple and Google had reached $630 and $440 billion, respectively.

**A FAVORABLE REGULATORY ENVIRONMENT FOR OTT PLAYERS, BUT VARYING ACROSS REGIONS**

A lack of balance in regulation between OTT players and telecom operators

OTT players differ from operators not only in their business models (limited investment, few employees, high growth, global footprint, etc.) but also in the rules applied to them in terms of regulation and taxation. So far, they have benefited from little or no regulation, while telecom operators are for their part, highly regulated. Moreover, they are able to put in place international tax optimization strategies, given the variation in regimes applied by different countries in this regard.

Nevertheless, states and regulators are increasingly interested in OTT favorable market conditions and are questioning the advantages they enjoy: tax optimization, dominant positions in certain markets, data privacy, their effect on the security of states against a backdrop of strengthening global terrorism, and the free flow of data across telecom operators’ networks (something known as “net neutrality”).

**The principle of net neutrality, as reaffirmed in the United States and Europe, is favorable to OTT players**

In the USA, the Federal Communications Commission (FCC), the communications regulator, recently reaffirmed the principles of neutrality with regard to services, applications, and legal content. Three obligations are applied to telecom operators in terms of Internet content, in line with the principles of freedom enshrined in the US Constitution:

- **No blocking**: Internet Service Providers (ISPs) may not prohibit online access to content, applications or legal services, thus preventing censorship activity or discrimination against specific sites or services.
- **No throttling**: ISPs cannot deliberately offer different terms to sites or intentionally slow down (or speed up) the loading of their data. The objective: to prevent the introduction and development of a two-tiered Internet.
- **No paid prioritization**: It is now forbidden for Internet service providers to charge a premium to sites that want to accelerate access to their content. Since the Internet is seen as a “public good”, the US ISPs Verizon and AT&T are subject to transparency obligations with regard to Internet traffic management. Moreover, the FCC directly manages user complaints.

In Europe, the European Parliament voted on October 27th 2015 for legislation establishing a principle of net neutrality similar to that applied in the US. The European Parliament, however, allows certain exceptions, which are considered to be favorable for telecom operators. Practices known as Zero Rating would be allowed. These practices consist of not counting toward overall usage the data used on some specific web-sites. For example, a customer could have a package providing 1GB of data a month, at a price of €10, but would also have the right to unlimited use of Facebook. Fast lanes would be allowed to provide certain services that cannot operate without such prioritization, such as very-high-definition IPTV services or video conferencing.

**The attitude of regulators remains more restrictive in some countries in Africa, the Middle East, and Asia, where OTT services are sometimes banned. In Morocco, at the start of 2016, the national agency for telecommunications regulation judged that VoIP services provided by OTTs should be subject to licensing. It asked the operators to block these OTT services, triggering a significant public reaction, in particular from youth.**

**OTT PLAYERS AND THE CONQUEST OF AFRICA**

OTT players are thriving in Africa, driven by smartphone penetration and the roll-out of 3G/4G networks.

**The development of international OTT players in Africa remains lower than on other continents.**

For them, Africa is the major source of future growth; they are investing in the continent directly (Facebook and Netflix opened offices in South Africa in 2015) or in partnership with telecom operators: Vodacom with Naspers (South Africa, 2015) and WhatsApp with Airtel (Nigeria, 2014).

Whilst they target all African countries, South Africa is the preferred point of entry for OTT players because of its Anglo-Saxon culture and higher level of maturity (developed telecom networks and a higher per-capita GDP).
African Telecoms Operators are Particularly Impacted by OTT Players Due to the Importance of Voice Revenue in Africa

Current problems are essentially voice-related.

OTT players threaten revenues from the key mobile telephony services: SMS, roaming, national and international voice calls. However, voice and SMS charges still accounted for about 90% of total revenue for African mobile operators in 2015 compared with less than 50% in Europe).

Globally, VoIP from OTT players will represent 8.7 billion minutes and an estimated revenue of $63 billion in 2018. In Africa, operators are therefore seeing their voice revenues heavily impacted while, at the same time, they have to consent to heavy investments in licenses and 4G frequencies, as well as network infrastructure (3G and 4G).

There are very few unlimited package deals of the kind found in Europe; instead, the majority of services are priced by the minute or second. Against this backdrop, the “free” offers of the OTT players are not only attractive to consumers but directly affect the revenue of African operators. For example, in Morocco, SMS traffic has fallen nearly 25% year-on-year, reflecting the growth of i-messaging and instant messages on Viber or WhatsApp.
CHALLENGES AND IMPACTS CREATED BY "OVER-THE-TOP"

The development of 3G/4G networks and smartphones will accelerate the arrival of OTT players in Africa

The development of low-cost smartphones, priced at less than $50, like the Orange Klif or the Elikia (the first African smartphone, created by the Congolese manufacturer, VMK) will boost the use of OTT services in countries where 3G/4G networks are in place. Between 2015 and 2020, the penetration levels of mobile broadband will experience exponential rise. Estimated as being 19% in Africa (and 81% in the OECD) in 2015, by 2020, these values are projected to reach 61% for Africa (compared with 93% for Europe).

Investments in submarine cables over the past 10 years have connected Africa to the high-speed global broadband infrastructure. Here again, this development favors the development of OTT use in Africa.

WHAT ARE THE LEVERS AND THE RESPONSES?

Operators have several strategic levers with which to address the challenges raised by OTT players: marketing leverage with their clients, their ability to negotiate with the OTT companies, and regulatory levers applied by public authorities and regulators.

Marketing levers

Being in direct relationship with the end customer, operators can exploit their marketing levers to absorb the impact of OTTs on their revenue.

/ Offer generous voice packages. Operators can offer generous voice packages — "unlimited calls" — to reduce the price advantage of OTT players on voice communications. These can be offered as prepaid packages, the method of payment almost exclusively applied in Africa.

/ Monetize the data. Operators must put a price on data and educate the market in this direction because today it is data that carries costs for them, operators and not voice communications. They can, at the same time, limit the use of data (capping/shaping) to protect against excessive usage, and encourage its consumption (tiering) via top-up offers. These pricing strategies allow operators both to develop their data revenues and avoid network saturation.

REGULATORY SOLUTIONS

In Africa, regulators and governments can implement supporting measures to help telecoms operators manage their transition to data, for example, by applying regulatory measures.

For example, blocking or limiting OTT services could be justified as a temporary measure, until such time as telecoms operators are less dependent on voice traffic, but would have a long-term negative economic impact that should not be underestimated.

The positive impact of Internet services in economic and social terms is unequivocal: a 10% increase in access to data would result in an increase in global GDP of 1.35% (source: GSMA). From a social perspective, education and culture could benefit from the democratization of data, with productivity gains estimated at $30 to $70 billion. Regulators and governments should, therefore, explore other types of remedy, such as tax incentives.

Penetration of high-speed mobile broadband

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26% CAGR - Compound Annual Growth Rate

OECD

AFRICA


Investments in submarine cables over the past 10 years have connected Africa to the high-speed global broadband infrastructure.

Investments in submarine cables over the past 10 years have connected Africa to the high-speed global broadband infrastructure.
However, African OTT players are also emerging, and they have been developing across the continent since 2010. They include:

**PARTNERSHIP STRATEGIES**

Increasingly, OTT and telecom players are jointly developing partnership strategies, such as Netflix Open Connect (Europe/USA) or Google Open Flow Wan (Europe/USA), which allow telecom operators to connect them directly to their infrastructure.

Google and Netflix have invested in their own networks in order to offer a higher quality of customer service. This translates into collaboration with telecom operators, through the installation of OTT players’ equipment as close as possible to the local operators’ networks. Facebook is implementing similar projects.

Some OTT players are willing to pay telecom operators for access to a guaranteed quality of service (QoS). This is the case for Netflix, which in 2014, agreed to pay Comcast to ensure an optimal quality of service for its customers.

This trend of cooperation between OTT players and telecom operators is gaining momentum in developed countries and could provide a model for Africa in the medium-term.

**IMPLICATIONS FOR GOVERNMENTS AND REGULATORS**

The arrival of OTT players in Africa is inevitable and must be matched with supporting measures that further encourage investment in telecom networks. For this, several areas must be investigated in more detail:

**Encouraging the development of 4G infrastructure**

- The granting of licenses and 4G frequencies, taking into consideration the new paradigm in the market (price of licenses, coverage targets, etc.)
- Facilitating infrastructure sharing on long-distance optical fiber infrastructure
- Promoting the sharing of infrastructure in sparsely populated areas
- Facilitating access to international bandwidth

**Adapting the regulatory and tax frameworks**

- Supporting operators in the transition to data by adapting taxation
- Defining a common position among African countries on net neutrality
- Defining a common position on the taxation of OTT players
- Encouraging investment in Africa by international OTT players (content distribution networks, etc.)

**Encouraging the emergence of African OTT players**

- Encouraging innovation, technology-related training, and African startups
- Creating favorable (legal and tax) conditions for financial investors in Africa.