

# **Technology and its Economic Impact on People and Businesses in South Africa**

---

---

---

---

---

---

---

---

---

---

# Contents

<b>Technology and its Economic Impact on People and Businesses in South Africa .....</b>	<b>1</b>
<b>Contents .....</b>	<b>2</b>
<b>Internet Access in South Africa .....</b>	<b>3</b>
<b>"Over the Top" Content versus Service Providers.....</b>	<b>4</b>
<b>Conclusion .....</b>	<b>5</b>
<b>Bibliography .....</b>	<b>6</b>

## Internet Access in South Africa

Global technology has progressed by leaps and bounds in recent years and is still growing to the point where it will be pervasive in all industries. South Africa is by no means one of the quickest adopters when it comes to bleeding edge technology but it has been making large strides in the telecommunications sector, particularly where internet connectivity is concerned. Improvement in broadband infrastructure and access have seen South Africa reach an Internet penetration rate of 40% (10% in the home and the rest in business) as of 2014 and that has risen to approximately 51.5% in 2015. The ever increasing bandwidth combined with the ever decreasing cost of Internet access has resulted in the movement of Internet access towards being a household commodity and a business essential as more of the population becomes familiar with it.

This increase in bandwidth has opened both businesses and households up to new, remotely offered, **Over the Top** services that are designed to keep people connected, entertained and increase productivity in a wide variety of industries. The convenience, cost and skyrocketing popularity of these services has resulted in issues surrounding use and contribution to the development of existing infrastructure used in telecommunications.

The term Over the Top (OTT) refers to services provided over the Internet rather than via a service provider's own dedicated network.

These services are delivered directly from provider to customer using an open Internet/broadband connection:

1. Independently of the receiver's Internet Service Provider (ISP).
2. Without the need for carriage negotiations.
3. Without any infrastructure investment on the part of the provider.

The main failing with such services is that they do not implement Quality of Service (QoS) and thus quality is not guaranteed. Examples of these include instant messaging services such as WhatsApp, Voice over IP services like Skype, and television subscription services such as Netflix, Apple TV and Hulu.

Service providers on the other hand:

1. Provide a "managed" service using specific protocols.
2. They typically do this using a closed, proprietary network accessed via a specific carrier.
3. They provide quality of delivery as services are optimised and customised to suit the network and end-device capability.

Examples of service providers in South Africa include Telkom and DSTV.

## **"Over the Top" Content versus Service Providers**

### **The Attraction of OTT**

The main issue between them is that large operators and service providers have been affected by the arrival and convenience as well as low cost of OTT services providing powerful if not overwhelming competition.

In many cases these OTT services compete directly with service provider offerings for example:

- SMS services by providers such as Telkom have already been outstripped by Instant Messaging (IM) services such as WhatsApp as far as message volume sent.
- With increasing levels of bandwidth many users are fleeing the tariffs of voice call service providers such as Telkom, Cell C, MTN and Vodacom for the cheaper OTT services such as WhatsApp call, Skype and other "Voice over IP" that offer calls at a cheaper rate that is consistently priced regardless of the destination being called and thus far more attractive as far as international communication is concerned.
- Television OTT services such as Apple TV and Android TV have taken the world by storm and are on the increase in South Africa as well. The only issue slowing down their adoption is the poor quality, speed and exorbitant cost of broadband Internet in the country. For those that can afford the capable bandwidth, these are favoured over TV subscription providers like DSTV due to the fact that they provide "On Demand TV". This allows customers to choose exactly the content they desire to watch and pay for it as opposed to being forced to pay a subscription for a group of channels they will not watch.

### **The Argument for Service Providers.**

Service providers and larger operators have commented that OTT service providers must pay for use of their infrastructure as they feel that they are benefitting from a "free ride" over the costly data carriage infrastructure they provide and maintain whilst using it to compete against them. They consider the way the OTT providers operate to be unfair and feel that these providers are draining from an essential source of revenue. According to service providers, this "revenue erosion" caused by OTT providers will make it difficult to sustain their service obligations and are calling for the Independent Communications Authority of South Africa (ICASA) to implement regulations that deal with risks of OTT providers.

Telkom's head of regulatory affairs and public policy; Richard Majoor has stated that ICASA should attempt to regulate OTT's directly "to the extent possible to make sure they make fair and proportionate contributions to the development of the telecoms sector".

### **The Argument for OTT Providers**

The main argument with regards to OTT providers is that, aside from providing services that are attractive to customers for many reasons, they are also often extremely cheap and thus consumers have been able to benefit greatly in both business and home lifestyle. The cost of communication via bandwidth is more affordable for home and business owner's than the cost of telecommunications services such as making voice calls on fixed landlines. There is almost no consumer that would willingly forfeit such luxuries for inflated tariffs. Small businesses and individual professional are free from the yoke of expensive services.

Service providers claim that OTT providers are getting a free ride however, is offset by the fact that the bandwidth has already been paid for by users to the service provider and the

nature of the data that goes over their telecommunications medium should be of no concern to them; an ideal situation known as **net neutrality**.

Service providers want OTT's to partner with them to contribute to infrastructure development and perhaps there is a way. Service providers can help to enhance the experience by providing Quality of Service that will improve the performance of OTT services and perhaps charging a fee to OTT's for doing so. Using regulations to impeded progress of subjectively “superior” services in order to protect their profits however, is most definitely a no-go area.

## Conclusion

The conclusion to this battle has yet to end but as the quality of Internet in South Africa improves so too will people's needs for the services that come with it and it is unknown how exactly that will affect billing for telecoms based services. The nature of services and the economy will always change over time and it is up to service providers to adapt to the economic environment for the good of the population and not to twist that environment for the their own benefit or profit.

## Bibliography

Broadband: How does South Africa compare to the world? | Telkom Business. 2015. *Broadband: How does South Africa compare to the world? | Telkom Business*. [ONLINE] Available at: <http://www.telkombusinessblog.co.za/?p=1501>. [Accessed 06 August 2015].

Africa Internet Users, Facebook and Population Statistics. 2015. *Africa Internet Users, Facebook and Population Statistics*. [ONLINE] Available at: <http://www.internetworldstats.com/stats1.htm>. [Accessed 06 August 2015].

Over the Top Services (OTT) | Technology Leadership | Pace Americas . 2015. *Over the Top Services (OTT) | Technology Leadership | Pace Americas* . [ONLINE] Available at: <http://www.pace.com/americas/our-thinking/over-the-top-services-ott/#>. [Accessed 06 August 2015].

OTTs must pay their way: Telkom | TechCentral. 2015. *OTTs must pay their way: Telkom | TechCentral*. [ONLINE] Available at: <http://www.techcentral.co.za/otts-must-pay-their-way-telkom/51432/>. [Accessed 06 August 2015].

The rise of internet TV | DestinyConnect. 2015. *The rise of internet TV | DestinyConnect*. [ONLINE] Available at: <http://www.destinyconnect.com/2014/07/22/the-rise-of-internet-tv/>. [Accessed 06 August 2015].

Telkom (South Africa) - Wikipedia, the free encyclopedia. 2015. *Telkom (South Africa) - Wikipedia, the free encyclopedia*. [ONLINE] Available at: [https://en.wikipedia.org/wiki/Telkom\\_\(South\\_Africa\)](https://en.wikipedia.org/wiki/Telkom_(South_Africa)). [Accessed 07 August 2015].