



ITU EXPLAINERS

OVER THE TOP (OTT) SERVICES

What are Over the Top (OTT) services?

There is no single universally agreed definition of an Over the Top (OTT) service, and a variety of definitions are used by different bodies and in different forums. But in essence, an OTT service is a service or application which is provided to a user over the internet, in most cases without a network operator being involved. This covers a wide range of services which are provided “over the top” of the internet, including communication and messaging services (such as Skype, WhatsApp, Viber and Facebook Instant Messenger) and audio and visual broadcasting services (such as Spotify, YouTube TV, Netflix and Amazon Video). Indeed, almost all services delivered using the internet could, in a broad sense, be considered OTT services.

Although OTT services have often been framed in opposition to traditional services provided by telecommunications service providers (telcos), such as telephony and SMS, some argue that this distinction is becoming obsolete. Many telcos are also involved in delivering OTT services or collaborating with OTT providers. Hong Kong-based telco, PCCW, for example, now offers an online media streaming service, ‘Viu’, which is largely programmed with regional content. In Germany, Deutsche Telekom has partnered with Spotify to offer its music services through a bundled mobile package. And in some countries, telcos such as Vodafone are offering ‘Voice over Wifi’ which allows users to make calls using a Wifi connection.

Why are OTT services being discussed at the ITU?

While traditional telecommunications services are largely regulated at the national level, the ITU has a role in influencing that regulation through the ‘International Telecommunication Regulations’ (ITRs) and other technical standards which it sets. Since, in recent years, there have been calls for OTT services to be regulated in the same way (or similarly) to traditional telecommunications services, some are also suggesting that it would make sense for the ITU to be involved, at least to some extent, in discussions around what that regulation should look like.

Many, however, strongly reject the argument that telecommunication services and OTT services - and therefore how they should be regulated - are comparable. This debate is covered in more detail in the next section). But

engaging in this debate first requires an understanding of the broader context of telecommunications service regulation.

There are various reasons why regulation of telecommunications services is considered necessary: for example, to ensure proper management of the electromagnetic spectrum upon which many telecommunication services depend; to ensure that different aspects of the technology are interconnected and interoperable; to ensure the resilience of telecommunications networks as an element of a country's 'critical national infrastructure'; to ensure a sufficient level of consumer protection; and to promote market competition.

What regulations do telcos face?

The particular regulation that a telco is subject to depends on the state in which it operates, however regulation commonly includes requirements:

- to obtain a licence or authorisation to provide telecommunication services;
- to provide "best effort" data transport without discrimination;
- to provide access to emergency services' telephone numbers;
- to invest in network infrastructure;
- to pay national taxes; and
- to comply with national data protection and privacy laws.

OTT services, on the other hand, are delivered over the internet, a global medium with no limitations equivalent to the finite nature of the electromagnetic spectrum. This means that OTT service providers are generally able to operate in multiple countries, regardless of where the base of their operations is, as opposed to traditional service providers which often greater challenges to operating across borders. As a result, and because of the wording of current regulations, OTT service providers are often under no obligation to comply with the same regulations as traditional telcos. And because they don't face the same level of regulation as traditional telcos, OTT service providers often incur fewer regulatory costs and are able to pass these savings onto their user, and even offer services free of charge.

A notable example of a discussion of OTT regulation at the ITU was the 2012 World Conference on International Telecommunications, where the European Telecommunications Network Operators tabled a controversial proposal to impose regulation of OTT services through the ITU's ITRs. The proposal – which was in the end withdrawn – would have seen the introduction of a new pricing scheme under which content providers, OTT service providers and other application service providers would have to pay to interconnect with existing telcos. The scheme would have allowed for users to pay a premium for

higher quality service provision which some critics argued would undermine the principle of 'net neutrality'.

What is interconnection?

By "interconnect", we mean that the networks or services would have the physical and technical interoperability required to allow a person who can access one of the networks or services also to be able to access the network or services provided by the other. An example would be a requirement that the user of an OTT communications service be able to contact the national emergency service number via that service.

What is the debate about?

As noted above, the key fault line in the debate is about regulation: should telecommunication services and OTT services face the same (or a similar) level of regulation?

On one side, many telcos argue that OTT service providers have an unfair competitive advantage, because they face fewer regulatory constraints. They are therefore able to offer their services at substantially lower cost. As a result, the argument goes, OTT services have been able to cannibalise the market, resulting in revenue losses for traditional telcos. The solution put forward by these telcos is to create a regulatory level playing field for both telcos and OTT services (sometimes called the 'same services, same rules' approach), which could mean, among other things, the ITU playing a role in developing technical standards which would apply to OTT services.

On the other side, many OTT service providers argue that there are significant differences between OTT services and traditional telephony services and SMS, and that demand for OTT services actually drives demand for greater access and broadband speeds, as well as levels of data usage, therefore resulting in greater overall revenue for telcos. As such, they contend that further regulation would be inappropriate and risks stifling innovation and the economic and social benefits that OTT services provide.

Why should human rights defenders care?

The regulation OTT services face is not just a policy question. Inappropriate regulation could adversely impact a number of human rights, particularly the

rights to freedom of expression and aspects of the right to privacy (such as privacy of correspondence and data protection):

Freedom of expression: The availability of communication services offered at substantially lower prices, or even at no cost (particularly VoIP and messaging applications such as Skype or WhatsApp), have provided new means for individuals to exercise their right to freedom of expression, as well as other connected rights such as freedom of association. Furthermore, the right to freedom of expression also includes the right to seek and receive information and ideas. OTT services which enable content and information sharing, such as YouTube, support the ability of individuals to seek, receive (and share) such information and ideas worldwide in a way that is simply not possible with traditional services. Inappropriate regulation which limited or restricted the ability for OTT services to operate could result in adverse consequences for their freedom of expression.

Privacy (private correspondence): An additional advantage of some OTT communication services is their ability to employ end-to-end encryption (as WhatsApp does, for example). The protections encryption provides allow users to have confidence in the security, confidentiality and integrity of those communications, and to exercise their right to privacy and, in particular, to private correspondence. Again, inappropriate regulation which limited or restricted the ability for OTT services which incorporate encryption (or other privacy-protecting standards) to operate could diminish their ability to enhance the right to privacy, and private correspondence and communications in particular.

Privacy (data protection): Given the large amounts of personal information and data – which can include, or reveal, sensitive information about an individual – generated, collected and used by OTT services, it is important that there are sufficient protections in relation to individuals' right to privacy and data protection. However, given that the ITU does not have a mandate to set standards or regulate on either privacy or data protection, it is incumbent upon the states themselves to ensure sufficient and appropriate privacy and data protection laws and policies apply to OTT services operating within their states, consistent with international human rights law and standards.

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Where is the discussion taking place?

Discussions around OTT services are taking place in a number of forums within the ITU:

- In ITU-T Study Group 3 (“Economic and policy issues”), OTT services have been explicitly listed within one of the questions it is examining, namely Question 9/3 on the economic and regulatory impact of new Internet services on international telecommunication services and networks;
- In ITU-D Study Group 1 (“Enabling environment for the development of telecommunication/ICTs”), OTT services are explicitly listed within one of the questions it is examining, namely on the policy, regulatory, and technical aspects of the migration from existing networks to broadband networks in developing countries.
- In June 2017, the Council Working Group on international internet-related public policy issues launched an open consultation on public policy considerations for OTTs which included collecting written submissions, a physical open meeting in September 2017, and a summary document which will be delivered to the Council Working Group itself.

It is likely that further discussions around OTT services will also take place at upcoming ITU forums and events, including the World Telecommunication Development Conference in October 2017 and the Plenipotentiary Conference in late 2018.