



# Functionality of Online Pornography Services

A BBFC research report for Ofcom

# Please note:

This report contains graphic language.

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# **About the BBFC**

The British Board of Film Classification (BBFC) is the independent regulator of film and video content in the UK. We have been classifying UK cinema releases for over 100 years and video releases since the introduction of the Video Recordings Act 1984 (VRA). We are also the independent regulator, on a voluntary, best-practice basis, of content delivered via the UK's four mobile networks. And we are the partner to over 25 video-on-demand and streaming services, which carry our age ratings on their content in the UK to help families make safe and informed viewing decisions.

The BBFC has expertise in the regulation of pornography arising from our statutory role under the VRA and our former designation as Age-Verification Regulator under Part 3 of the Digital Economy Act 2017. Currently, the BBFC classifies all pornographic content released in physical formats (such as DVD and Blu-ray) under the VRA and also regulates, on a best-practice, non-statutory basis, pornographic content distributed online on a small number of on-demand services.

# **Executive Summary**

This research was conducted between August 2022 and March 2023. The report reflects the provisions of the Online Safety Bill published on 18 January 2023, which was the most up-to-date version at the time of drafting. The Bill was subsequently amended before receiving Royal Assent.

As a result, certain terms used in the report, which were based on definitions in the Bill at the time, and references to Bill clauses do not accurately reflect the relevant provisions of the Online Safety Act 2023 ('the Act').

The following are the areas where terms in the report do not match the provisions of the Act.

- Throughout this report, there are references to self-declaration as a form of age assurance. For the purposes of the Act, section 230(4) states that a measure which requires a user to self-declare their age (without more) is not to be regarded as age verification or age estimation.
- Page 28 of the report references the definition of age assurance from the Bill in January 2023. The term 'age assurance' is now defined in section 230(2) and (3) of the Act as:
  - (2) "Age verification" means any measure designed to verify the exact age of users of a regulated service.
  - (3) "Age estimation" means any measure designed to estimate the age or age range of users of a regulated service."
- Pages 6-7 of this report cite the clause of the Bill from January 2023 which explains references in the Bill to pornographic content that is 'published or displayed'. The relevant clause has been superseded by section 79(2) of the Act, which provides as follows:

"Provider pornographic content", in relation to an internet service, means pornographic content that is published or displayed on the service by the provider of the service or by a person acting on behalf of the provider, including pornographic content published or displayed on the service by means of— (a) software or an automated tool or

algorithm applied by the provider or by a person acting on behalf of the provider, or (b) an automated tool or algorithm made available on the service by the provider or by a person acting on behalf of the provider.'

Readers should bear in mind these changes when reading the report.

This research, produced for Ofcom by the BBFC, explores the nature and functionality of the top 100 online pornography services accessed by people in the UK.

This project was conducted in two stages. For stage 1, Ofcom provided a set of research questions and asked the BBFC to manually explore the top 100 online pornography services accessed from the UK using a list of domains ranked by UK traffic in the month of May 2022. The data was sourced from the Ipsos Iris Online Audience Measurement Service, and provided to the BBFC by Ofcom. We focused on services that appeared primarily to host pornographic content as defined in the Online Safety Bill ('the Bill'):

"Pornographic content" means content of such a nature that it is reasonable to assume that it was produced solely or principally for the purpose of sexual arousal.'2

Stage 2 of the project allowed us to conduct a deeper evaluation of a smaller subset of services from within the top 100. The purpose was to supplement the findings from stage 1 by providing a richer understanding of the different ways in which pornographic content is published and displayed on online services, and to explore in more detail the distinctions between 'user-generated content' (UGC) and 'provider' pornography, as defined in the Bill.

**UGC** is 'Content (a) that is—(i) generated directly on the service by a user of the service, or (ii) uploaded to or shared on the service by a user of the service, and (b) that may be encountered by another user, or other users, of the service by means of the service'.<sup>3</sup>

**Provider pornographic content is** 'Pornographic content that is published or displayed on the service by the provider of the service or by a person acting on behalf of the provider (including pornographic content published or displayed on the service by means of software or an automated tool or algorithm applied by the provider or by a person acting on behalf of the provider)'.<sup>4</sup>

<sup>2.</sup> Online Safety Bill, Part 5, clause 70(2). Please note all citations from the Bill refer to the version published on 18 January 2023.

<sup>3.</sup> Online Safety Bill, Part 3, clause 49(3).

<sup>4.</sup> Online Safety Bill, Part 5, clause 70(3).

## **Publication and display**

- Almost three quarters (74%) of services allowed users to upload or stream content. In most cases there was a clear route to upload. In a minority of cases, we referred to terms and conditions to establish that the service allowed UGC despite not being able to identify such functionality on the service.
- At least 30% of services in the top 100 were publishing provider content. This
  was most obviously the case in relation to 'aggregator services', which gather and
  display clips hosted elsewhere.
- At least 76% of services in the top 100 allowed some form of user-to-user interaction. These included likes/dislikes, comments, live chat, private/direct messaging, ratings, and discussion forums.
- Private/direct messaging was offered by 48% of services. Many services enabled users to message other users, including performers/creators.
- Nearly half (47%) of the services in the top 100 were 'tube services', which for the purposes of this report we are considering to be free-to-access video-sharing platforms 'which allow users to upload and share videos with the public'. Other types of service included aggregator services (18%); 'cam services' (14%), where performers can live-stream sexual activity; and 'premium/subscription services' (10%), which specialise in content that must be paid for (though may also offer 'preview' content for free).
- Many services offered multiple functionalities. For example, some tube services also had premium content or a 'live cams' section.

The table below sets out the percentage of services that host UGC only; the percentage of services that host provider content only; and the percentage of services that host UGC but in relation to which we were unable to make a determination about the presence of provider content. It also notes where services hosting provider content only also facilitate user-to-user interaction.

Nature of service	% of services
Hosts <i>only</i> UGC	39%
Hosts <i>only</i> provider content  • Hosts only provider content and allows for user-to-user interaction	26% • 7%
Hosts UGC <i>and</i> provider content	4%
Hosts UGC but unable to make a determination about provider content	31%

Figure 1 Source: BBFC analysis

## User journey and age assurance

**Age assurance is** 'a broad term that refers to the spectrum of methods that can be used to be informed about a user's age online. The term may also be used to refer to the level of confidence that a platform has in the age of its users.'6

- Age assurance was present on 37% of services. With one exception, this took the form of self-declaration, which required users to click a button or check a tickbox to confirm they were 18 or over. On 76% of the services that had age assurance present (28 services), no pornography was visible until the age assurance had been passed. Content was generally blurred or otherwise obscured. On the remaining 24% of services (nine services), pornography was clearly visible alongside the age-assurance mechanism. Four services were fully navigable without any need to interact with the age-assurance mechanism.
- The exception to the above (the highest-ranked premium/subscription service) required users to sign up for an account and undergo more rigorous age checks before allowing them to access pornography.
- A number of services required age/identity verification before allowing users to upload content. As far as we could identify without signing up to services, this was a requirement on 32% of services that allow users to upload or stream content (24 services), including 100% of cam services (14 services).

#### **Business information**

- 24% of services offered a 'content partner program' or similarly termed arrangement. This is a way for content creators and/or pornography production companies to partner with a service in order to promote their content on the service.
- Advertising was present on 68% of services. Other common indicators as to how services are funded included revenue-sharing arrangements with performers/ creators and the availability of premium/subscription content.
- Some companies appear to own a number of services in the top 100. We identified 38 different parent companies across the top 100, though we were unable to make a determination in respect of every service on the list. The most prominent parent company had eight services on the list, followed by a company with four services. No other company appeared more than twice.
- The majority of services in the top 100 were based outside the UK. Cyprus was the most common location we noted, with 24% of services claiming to be based there. As with parent companies, we were not able to make a determination in respect of every service on the list.

## **Uncertainties raised by the research**

- We could not always differentiate between UGC and provider content. Some services may be carrying both UGC and provider content, but this was often not obvious.
- The implications of commercial arrangements between individual creators or pornography production companies and services are not clear. The commercial arrangements between creators or pornography production companies and services (such as a shared parent company, or content partner program) may have an impact on whether content uploaded to a service by a creator or production company should be considered UGC or provider content. This may merit further analysis. Furthermore, it is often difficult to determine where these arrangements are in place, because the information is typically not public-facing.
- Some aggregator services describe themselves as search engines. This may have implications in terms of which parts of the Bill relate to this type of service.

# Introduction

This research, produced for Ofcom by the BBFC, explores the nature and functionality of the top 100 online pornography services accessed by people in the UK, within the context of the Online Safety Bill ('the Bill').

The current draft of the Bill defines 'pornographic content' as:

'Content of such a nature that it is reasonable to assume that it was produced solely or principally for the purpose of sexual arousal.'

The Bill defines 'user-generated content' (UGC) as:

#### 'Content

- (a) that is—
  - (i) generated directly on the service by a user of the service, or
  - (ii) uploaded to or shared on the service by a user of the service, and
- (b) that may be encountered by another user, or other users, of the service by means of the service.'8

The Bill defines 'provider pornographic content' as:

'Pornographic content that is published or displayed on the service by the provider of the service or by a person acting on behalf of the provider (including pornographic content published or displayed on the service by means of software or an automated tool or algorithm applied by the provider or by a person acting on behalf of the provider).'9

The Bill also states that:

"Regulated provider pornographic content", in relation to an internet service, means provider pornographic content other than—

- (a) content consisting only of text, or
- (b) paid-for advertisements'10

#### and that:

'References to pornographic content that is "published or displayed" on a service—
(a) include, in particular—

(i) references to pornographic content that is only visible or audible to users

<sup>7.</sup> Online Safety Bill, Part 5, clause 70(2).

<sup>8.</sup> Online Safety Bill, Part 3, clause 49(3).

<sup>9.</sup> Online Safety Bill, Part 5, clause 70(3).

<sup>10.</sup> Online Safety Bill, Part 5, clause 70(4).

as a result of interacting with content that is blurred, distorted or obscured (for example, by clicking on such content), but only where the pornographic content is present on the service, and

(ii) references to pornographic content that is embedded on the service; (b) do not include references to pornographic content that appears in search results of a search service or a combined service.'11

These definitions mean that it is not just the content itself that determines the status of that content (UGC or provider) but also how and by whom that content is added to the service.

In this report we also refer to 'sexualised' content visible on the services we assessed. This was content that, if it were appearing in a context other than on a pornographic service, may not meet the definition of 'pornographic content' set out in the Bill. For example, this could include:

- Non-explicit posing in underwear or swimwear
- Non-explicit nude posing where breasts, genitals and/or buttocks are hidden by the positioning of the pose or masked by other graphics
- Images where nudity or sexual activity is fully masked by pixelation or blurring

## **Methodology**

This project was conducted in two stages.

For stage 1, Ofcom asked the BBFC to manually explore the top 100 online pornography services accessed from the UK. For this purpose, Ofcom supplied a list of domains ranked by UK traffic across the month of May 2022. The data was sourced from the Ipsos Iris Online Audience Measurement Service.

We excluded services listed in the top 100 that did not appear primarily to be hosting pornographic content. Although some of these services may include some pornographic content, pornography did not appear to be their core offering. We excluded the following services on this basis:

- Four adult dating/'hook-up' services
- An online store specialising in sex toys, lingerie and other adult products
- A platform for the marketing of adult products and services, such as escort services
- An adult discussion forum
- A social network focusing on BDSM
- An adult discussion forum, with a focus on escort services

We also excluded one service that simply redirected to another service on the list. We excluded another service without visiting it, as we were aware that it potentially contained prohibited images of children, which are illegal under Section 62 of the Coroners and Justice Act 2009. In total, therefore, we discounted 11 services from the top 100.

Where we excluded services, we included an equivalent number of additional services from the next position on the list (#101, #102, and so on) to ensure that our assessment was based on a sample of 100 services.

# On a small number of services, pornographic content was not immediately visible upon access

On a handful of services, the content displayed most prominently was perhaps more accurately described as 'sexualised' rather than explicitly pornographic. For example, it included no explicit detail of genitals or sexual activity.

This included two **voyeur services**, which display live video streams of houses where 'real people' are living and which also feature the ability to view content already recorded. The participants visible in the live streams on the homepages at the time of our review were just going about their day. But one of the two services also featured blurry thumbnail images showing people naked, including some that appeared to be engaging in sexual activity, and information published on both services indicated that they may be adult in nature and may contain explicit sexual activity. For these reasons, we included these services in our assessments.

On one **gaming service**, the most prominent visual content was imagery of animated characters in revealing outfits and sexualised poses, but the level of detail was not explicit. Information published on the service, however, stated that its core offering was different types of pornographic games, hence its inclusion in our report.

Finally, we did not note any explicit content on the homepage of one of the three services in the top 100 that specialise in **sex scenes from films or TV series and/or nude photos of celebrities**. However, the service also offers categories for real sex, viral sex tapes and viral porn star videos, all of which do feature pornographic content. There are also pornographic adverts present on the service. Again, this was our rationale for including these services in our assessments.

Stage 2 of the project allowed us to conduct a deeper evaluation of a smaller subset of services from within the top 100. The purpose was to supplement the findings from stage 1 by providing a richer understanding of the different ways in which pornographic content is published and displayed on online services, and to explore in

more detail the distinctions between UGC and provider pornography.

We based all our findings on information that was publicly available on the services we looked at. We did not sign up for an account on any service, and we did not contact any service operators. Our assessments are therefore to be read in this context.

We have amalgamated our findings from the two stages of the project for this report.

# Section 1: Publication and Display

This section considers questions relating to the various ways in which pornographic content is published and displayed on online services. It covers different ways of categorising services, different ways in which content is added to services and aspects of UGC and provider content. It also considers aspects of how pornography is displayed and the different ways in which services enable users to interact with one another.

## Pornographic services can be categorised in different ways

Where applicable, we have assigned each service within the top 100 one of the following four categorisations:

- **Tube service (47% of services)** The service is a free-to-access video-sharing platform 'which allow[s] users to upload and share videos with the public'.<sup>12</sup>
- Aggregator service (18% of services) The service aggregates clips hosted elsewhere, rather than publishing its own content or hosting content uploaded by users
- Cam service (14% of services) The service provides a platform for performers to live-stream sexual activity.
- Premium/subscription services (10% of services) The service primarily offers 'premium' content that must be paid for.

Some services offer more than one functionality; we have made our determination based on what the service's *primary function* appears to be, according to the type of content and/or functionality most prominent on the homepage. For example, many tube services offer other services (such as 'live cams' or 'games') within the menu at the top of the homepage, but these are presented as additional and supplementary to the primary 'tube' aspect.

The remaining 11% of services did not appear to fall within one of the above four categorisations. These included:

- Three services specialising in interactive games featuring pornographic imagery
- Three services specialising in sex scenes from films or TV series and/or nude

photos of celebrities (while one of these services allowed users to upload content and so might also be described as a tube service, we have not considered it as such for the purposes of this research given the focus of its content is so specific)

- Two 'voyeur' services offering live streams of people's homes, including the
  possibility of sexual activity (these were distinct from cam services in that the
  streams are operational 24/7 and not in the control of the people appearing on
  camera. For this reason, we considered these services to be offering provider
  content rather than UGC)
- One service specialising in pornographic GIFs that is, short looping images
- One service specialising in pornographic still images
- One service specialising in written pornographic content

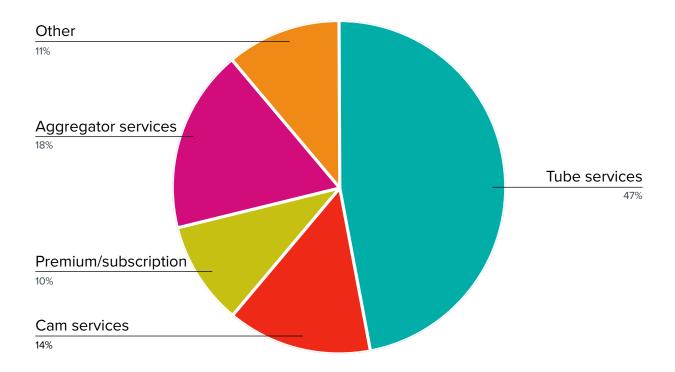


Figure 2 Source: BBFC analysis

## **Services with multiple functionalities**

From a sample of the 20 highest-ranked services,<sup>13</sup> 60% (12 services) offered more than one functionality in the menu on the homepage, as set out in the table below.

It is often the case that when a user clicks to access any of the supplementary offers, they are redirected to another service. For example, the 'live cams' option on a tube service may link through to an external cam service, or the 'dating' or 'local sex' option may link through to a specialist adult dating/'hookup' service. This is denoted by an asterisk in the table below.

Of the 12 services from the top 20 that we identified as offering multiple functionalities, 11 offered at least one option that linked to an external service. In some cases these external services appeared to be owned by the same company or parent company as the source service, but we were unable to make a determination either way.

Service ranking	Primary functionality	Supplementary functionality (Functionalities are listed in the order they appear on the service and using the service's terminology; *indicates functionality is hosted on an external service)
#1	Tube service	Premium content* Live cams* Local sex* Community Shop Photos & Gifs
#2	Tube service	Premium content* Live cams Games*
#4	Tube service	Live sex* Premium content* Photos Dating
#5	Tube service	Live cams Sex stories* Forum Games* Premium content*

#12	Premium/	Likes
	subscription	Comments
	service	Private/direct messaging
#13	Tube service	Live cams*
#16	Tube service	Cam sex* Fuck now* (which linked to an adult dating service) Premium content*
#17	Cam service	Local dates*
#18	Tube service	Live cams*
#20	GIF service	Live sex* Sex games*
#22	Cam service	Videos Sex games
#24	Written 'erotica' service	Shop Bulletin board Webcams Personals* Erotic chat VOD*

Figure 3
Source: BBFC analysis

## Content is added to pornographic services in five main ways

- 1. Uploaded by users. User uploads are a prerequisite for tube services (47% of the services in the top 100) and are also facilitated by a number of other types of service as set out in the next section ('74% of services in the top 100 allowed users to upload or stream content'). This functionality was often straightforward to determine: for example, an obvious 'upload' button was present on the homepage of 55% of the 60 services which allow user uploads (33 services).
- 2. Live-streamed by users. 14% of services in the top 100 were primarily cam services, which allow users to stream live sexual performances. Live-streaming was also offered as a supplementary functionality on some services that did not primarily present themselves as cam services.

- 3. Uploaded by third party companies. 31% of services in the top 100 allowed users to view content sorted into branded 'channels' (also known as 'studios' on some services). These are sections of the service where the content is provided by a specific pornography production company. We did not find any information that suggests the upload process for companies is substantially different from the upload process for independent creators.
- 4. Published by the service itself. At least 30% of services in the top 100 published provider content. This included a number of premium/subscription services that primarily offered content produced by a specific pornography production company. As there is no obvious upload functionality for video content provided on these services (though one accepted user-submitted 'erotica'), we can assume that the service operator has full or primary responsibility for publishing the content available on the service and that this is therefore provider content.
- **5. Gathered from external services by an automated tool.** We identified 18% of services in the top 100 as being aggregator services. These are services that embed or link to content hosted on other services, rather than publishing their own content or allowing users to upload content. The following are some examples of how such services describe their functionality to users:
  - 'We do not upload or post any Content to the Website. The Website merely contains information regarding the location of files on the Internet, at locations which we do not own, operate or control. You understand and acknowledge that, when using the Website, you will be exposed to Content from a variety of sources including content made available on the Website through automated means (collectively, "Third Party Content") and that we do not control and are not responsible for any Third Party Content.'
  - 'All links and thumbnails displayed on this site are automatically added by our crawlers. We do not own, produce, host or upload any videos displayed on this website, we only link to them.'
  - 'We do not own, produce or host the videos displayed on this website. All videos are hosted by 3rd party websites. We have no control over the content of these websites.'
  - '[The service] is a search engine, it only searches for porn tube movies. All links and thumbnails displayed on this site are automatically added by our crawlers. Indexing process is completely automated.'
  - '[The service] is an automated search engine for porn videos. We do not control, host, or own any of the content on this site.'

## Are aggregator services search engines?

It is interesting to note that six aggregator services, which by the definition in the Bill appear to host provider pornographic content, identified themselves as 'search engines'. For the purposes of the Bill, a 'search engine' –

- (a) includes a service or functionality which enables a person to search some websites or databases (as well as a service or functionality which enables a person to search (in principle) all websites or databases);
- (b) does not include a service which enables a person to search just one website or database.<sup>14</sup>

All six services appeared to offer 'a service or functionality which enables a person to search some websites or databases' in the form of a search bar, and all appeared to enable users to search more than one website or database. Such functionality was also provided on the majority of other aggregator services.

It could be argued that aggregator services might, therefore, meet both the definition of provider pornographic services, in that they display 'pornographic content [...] by means of software or an automated tool or algorithm applied by the provider or by a person acting on behalf of the provider', and the definition of search engines, in that they could be said to '[include] a service or functionality which enables a person to search some websites or databases'. We note this as it may have implications in terms of which parts of the Bill relate to these types of pornography service.

# 74% of services in the top 100 allowed users to upload or stream content

These were primarily tube services (47 services) and cam services (14 services). The other services were as follows:

- Seven premium/subscription services
- Two pornographic gaming services
- One celebrity nude service
- One erotic fiction service
- One GIF service
- One image-sharing service

In some cases we were unable to identify an obvious way for users to upload or stream content should they wish to do so, but such functionality was referenced in the service's terms and conditions. For the purposes of this research, we have counted services' claims to offer this functionality in their terms and conditions as being indicative of UGC, even where the mechanism by which content can be uploaded is not apparent on the service itself.

Where, however, an upload mechanism is not apparent and there is no other indication that the content on the service is UGC, we have assumed that there is no upload mechanism for users and that the service is therefore publishing only provider content.

# Tube services may carry provider content in addition to UGC – but the implications of commercial arrangements between creators or pornography production companies and services are unclear

We noted one tube service that, in addition to carrying UGC, we were confident was publishing provider content. We made this determination based on there being a page of content uploaded by a user with the name of the service (featuring 7,806 videos), suggesting that the service operator was publishing content as well as accepting submissions from users.

It is possible that some other tube services, as well as some premium/subscription services, may host both UGC and provider content, though in all other cases we were unable to make a definitive determination.

Many tube services carry content produced and seemingly uploaded to the platform by particular pornography production companies, which is often displayed on branded 'channels' (alternatively called 'studios' on a minority of services). The term 'channel' can have different meanings – for example in the context of television broadcast or on non-pornographic video-sharing platforms – but in the context of pornography services, channels are usually specific profile pages operated by a particular production company that users can subscribe to. This is the meaning we have given to the term for the purposes of this report.

We noted two services that appeared to allow individual creators to operate channels, but generally channels appeared to be reserved for more established brands. On some services, there was evidence to suggest that channels are granted to those who have signed up to the service's 'content partner program'. Across the range of services that allowed users to browse by channels, there was a degree of consistency in which brands were ranked amongst the most popular. Channels are distinct from the 'pages' of typical users, and are often offered as a separate option on the homepage menu which allows users to browse the various channels offered on a particular service.

Channels were present on 31% of services – of which 94% (29 services) were tube services. In some cases, the production company and the service may be owned by the same parent company, which potentially suggests a commercial relationship that is distinct from the relationship between the service and a typical content creator. This may have implications for whether such content is considered UGC or provider content. This may merit further analysis.

# Some production companies/creators use tube services to promote their content on other services

Channels on tube services often provide links through to other services that appear to host provider pornographic content. For example, the channel associated with a particular pornography production company will tend to link through to a distinct service operated by the same production company. In this respect, the tube service is used as a 'shop window' through which the production company/creator will attempt to direct users to their own external paid-for provider content.

It is also not uncommon to see creators on highly-ranked tube services using their pages to direct their viewers to other platforms on which they are active. These include other adult services, for example cam services or premium/subscription services, but also 'mainstream' social media platforms.

# At least 30% of services in the top 100 were publishing provider content

This was most obviously the case in relation to 'aggregator services' (18% of the top 100). The definition of provider content in the Bill specifically includes services of this nature, referencing content 'published or displayed on the service by means of software or an automated tool or algorithm applied by the provider or by a person acting on behalf of the provider'.<sup>16</sup>

Other types of services that we were confident were publishing/displaying provider content included three premium/subscription services that appeared to be operated by pornography production companies. While content on these services must be paid for, the services also offered access to free 'preview' pornographic content in order to encourage users to become paying customers. Such content was usually available on the homepage of these services, and in some cases these clips were no different in length than content that tends to be posted on tube services.

Other services we were confident were publishing provider content included two services specialising in nude images of celebrities, whether from films/TV series, candid paparazzi shots or 'leaked' images. On both services, the content appeared to be primarily or solely posted by the service owner, as all content reviewed during our visits to the service was attributed to a single user.

The top-ranked service that we identified as publishing provider content was ranked by traffic at #30 on the list. The rankings of the other 29 services were spread fairly evenly down the remainder of the list, from #37 to #106.

As per our comments regarding 'channels', It was unclear to us whether certain services that were ranked higher on the list may also be publishing provider content in addition to UGC. If channels are taken to be indicative of provider content, then the percentage of services publishing provider content would more than double, rising from 30% (the number of services we are confident are carrying provider content) to 61% (additional services with channels).

### There are different varieties of premium/subscription services

There were 10 premium/subscription services in the top 100.

On 60% of these (six services), the user is required to pay a fee in order to subscribe to *the service* before they can access any premium content (preview clips are generally made available for free).

On the other 40% (four services), the user pays a fee in order to subscribe to a creator active on the service (two services) or purchases clips from a creator on a per-video basis (two services).

## Premium/subscription services offer UGC and/or provider content

Of the 10 premium/subscription services in the top 100, we noted four that, based on the definition of 'content' offered in each service's terms, appeared to carry UGC only. These were the same four services on which, as noted above, users could either subscribe directly to content creators or purchase clips from creators on a per-video basis.

Of the remaining six services, we noted two that were carrying UGC but we were unable to verify whether they might also have been carrying provider content. This was due to a lack of clarity about the commercial relationship between the service and the content provider (we explore these challenges further in the following section).

One service was carrying both UGC and provider content, in that it accepted usersubmitted erotica (text) but all of the available video was provider content. The final three services appeared to carry provider content only based on there being no user upload option or on what the services said about their own content.

# Pornographic content is usually displayed on homepages as thumbnails in a grid layout

We analysed the homepages of the highest- and lowest-ranked example of each type of service to assess different ways in which pornographic content was displayed. Though there were small discrepancies, aggregator services, cam services, premium/ subscription services and tube services all displayed pornographic content on their homepages in a similar fashion — as pornographic thumbnails in a grid layout.

A later section of this report covers the age-assurance mechanisms that are or are not encountered when accessing the homepages of services, and so we do not address that here.

## **Aggregator services**

On the **highest-ranked aggregator service**, the pornographic thumbnails were in the form of still images taken from pornographic videos. They were arranged in a grid layout and separated into a number of sections according to different themes.

In the first section, 'Popular Videos', clicking each thumbnail opened a pornographic video in a new window. On this particular service (though this is not always the case across the full range of aggregator services), text beneath the thumbnails identified the service from which each clip was sourced.

In the second section, 'Popular Categories', the thumbnails illustrated the various categories that the pornographic videos accessible on the service had been sorted into – e.g 'Amateur', 'Anal,' 'BDSM', 'MILF', 'Teen' – which was also indicated by text beneath each thumbnail. Clicking on a thumbnail opened a new page where users could browse videos that fell within each category.

In the third and final section, 'Popular Pornstars', there were no thumbnails. Instead, there were various still images of pornography performers posing, usually in a state of undress. Clicking on an image opened a separate window, which offered a biography of the performer and allowed users to browse videos featuring them.

Users of the service could also search for clips using a search bar at the top of the homepage, or click on one of the following options:

- 'New videos', which sorts clips by recency
- 'Categories', which enables users to browse by category
- 'Pornstars', which enables users to browse by performer
- 'Hot videos', which navigates to an external service

At the bottom of the page, beneath a moving pornographic ad, was a list of 'popular searches', which included terms such as 'cumshot compilation', 'solo female' and 'uncensored japanese'.

On the **lowest-ranked aggregator service**, the pornographic thumbnails were in the form of still images taken from pornographic videos. They were arranged in a grid format and illustrated the various categories that the pornographic videos accessible on the service had been sorted into, which was also indicated by text beneath each thumbnail. For example, the first four were 'Mother', 'M.I.L.F.', 'Teens' and 'Latina'. Clicking on a thumbnail opened a new page where users could browse videos that fell within each category.

The various categories were also listed at the bottom of the page, in six columns running across the screen. The following options were provided in a bar at the top of the page:

- 'Top rated movies', which sorted videos by popularity
- 'New movies', which sorted videos by recency

#### **Cam services**

On the **highest-ranked cam service**, thumbnails – some though not all of which were pornographic – were displayed in a grid layout. The thumbnails were in the form of still images from performers' streams, and clicking on a thumbnail opened a new window, which showed the stream in progress.

A user could navigate the service by choosing from a menu the type of performer they would rather see (women, men, couples or trans). They could also search for content via tags, for example #asian, #bigboobs, #mature, #feet, and so on.

On the **lowest-ranked cam service**, thumbnails – again, some though not all pornographic – were once more arranged in a grid layout. Though initially appearing as still images taken from performers' streams, hovering over a thumbnail would make it move to show the stream in progress. Clicking on a thumbnail opened a new page where users could watch the stream.

A bar on the left-hand side of the homepage offered filters that users could use to refine the content that they were offered. For example, users could specify the gender or ethnicity of the performers they preferred to see or could choose from various tags such as 'Teen (18+)', 'MILF', 'Big Tits', 'Big Ass' and so on. On the right-hand side of the homepage was a pornographic moving advert showing close-up vaginal penetration. The service also offered a search bar.

## **Premium/subscription services**

We were not able to access the highest-ranked premium/subscription service without creating an account. Instead, we looked at the **second-highest-ranked service**. On this service, a scrolling banner across the top of the homepage encouraged users to sign up for an account in order to access the range of content provided by the

service. At the time of review, it was promoting a special offer of up to 50% off and was advertising the 'fan clubs' of particular performers and brands.

Below the banner, pornographic thumbnails were arranged in a grid layout. Though initially appearing as still images taken from pornographic videos, the thumbnails moved when the user hovered over them with their cursor, showing 'highlights' from the videos. The videos on the homepage were sorted into the following sections:

- 'Best videos'
- 'Videos by new creators'
- 'Videos by popular creators'
- 'Popular [Service] videos'
- 'Fanclub videos'
- 'Newest [Service] videos'

Users of the service could search for clips using a search bar, or they could click on one of the following options provided along the very top of the screen:

- 'Videos'
- 'Creators'
- 'Pornstars'
- 'Studios'
- 'Categories'
- 'Feed'
- 'VR Porn'

Alongside these options was a search bar that users could use to search for particular types of content.

On the **lowest-ranked premium/subscription service**, the homepage most prominently displayed a photo montage of women in sexualised poses. There were also smaller images included in the montage that were more explicit, including close-ups of fellatio, masturbation and penetration. Text stated that the service offered 'stolen sex tapes, leaked photos, forbidden scenes, hottest scandals, explicit paparazzi videos'.

Below the montage, the homepage was broken into a number of sections each offering 'instant access' to 'private and extremely hot pictures and stunning videos' featuring a different female celebrity, including pop stars, actresses and models. Pornographic still images, including depictions of oral sex, masturbation and vaginal penetration, were displayed in each section to illustrate the content available featuring each celebrity.

#### **Tube services**

On the **highest-ranked tube service**, the pornographic thumbnails on the homepage were displayed in a grid layout and sorted into the following sections:

- 'Hot Porn Videos In The UK'
- 'Most Viewed Videos In The UK'
- 'Recommended For You'
- 'Top Verified Amateurs'
- 'Top Channels'
- 'Recently Featured XXX Videos'<sup>17</sup>

Though initially appearing as still images taken from pornographic videos, the thumbnails moved when the user hovered over them with their cursor, showing 'highlights' from the videos.

Alongside a search bar, the following options were provided at the very top of the homepage:

- 'Porn Videos'
- 'Categories'
- 'Live Cams'
- 'Pornstars'
- 'Local Sex'
- 'Community'
- 'Photos & Gifs'

The service also provided a number of 'trending topics', which included, at the time of review, 'halloween sluts', 'no nut november' and the names of several specific performers. The homepage also featured moving pornographic adverts.

On the **lowest-ranked tube service**, the pornographic thumbnails on the homepage were displayed in a grid layout and sorted into the following sections.

- 'Trending big gay cocks'
- 'Newest gay dick porn videos'

The thumbnails were in the form of still images taken from pornographic videos. Hovering over a thumbnail caused it to rotate through a number of different stills taken from the same video. Alongside a search bar, the following options were offered at the top of the page:

- 'Videos' which allowed users to sort clips by 'latest', 'top rated', 'most viewed' and 'longest'
- 'Categories' which offered various options, including 'big amateur cock', 'bareback dicks', 'gaping assholes' and 'huge daddy cock'
- 'Meet&Fuck' which linked to an external service
- 'Hot Guys' which linked to an external service
- 'Live Sex' which linked to an external service

At the bottom of the page was a moving pornographic advert, as well as a link through a cam service.

# 11% of services in the top 100 linked primarily to content hosted externally

We tested whether content seemingly hosted on a service linked to another URL belonging to the same domain (such as a video displayed on the homepage of tubeservice.com linking through to tubeservice.com/video1)<sup>18</sup> or whether it redirected the user to a different domain. If the latter seemed to apply to most of the content on the service, we counted the service as appearing primarily to link to content hosted externally.

The 11% of services that appeared to link primarily to content hosted externally were all aggregator services. As noted previously, aggregator services can be considered to be publishing/displaying provider content, given the current definition in the Bill. However, not all aggregators behave in this way: on 39% of aggregators (seven services), the content was embedded on the service itself rather than linking to content hosted externally. Note that the Bill's definition of provider pornography explicitly includes 'pornographic content that is embedded on the service'.<sup>19</sup>

# 5% of services in the top 100 included pornography consisting only of text

The Bill states in Part 5, clause 70(4) that:

"Regulated provider pornographic content", in relation to an internet service, means provider pornographic content other than—

- (a) content consisting only of text, or
- (b) paid-for advertisements.'

We checked the menu on the homepage of each service for any sections that would indicate pornography consisting only of text. For example, we noted sections headed 'erotica' and 'sex stories', but noted these only on five services.

<sup>18.</sup> These domain names are for illustrative purposes only and are not the names of real services.

<sup>19.</sup> Online Safety Bill, Part 5, clause 70(5).

Pornography consisting only of text was the primary offer of one service on the list, which 'accepts quality erotic story submissions from amateur authors and holds story contests for contributors'. There were also sections for 'erotica' and 'sex stories' offered on a minority of tube services, as well as on one premium/subscription service. Clicking on the 'sex stories' option offered by two of the services diverted users to an external service that was not included within the top 100. **On all services where we noted pornography consisting only of text, the content appeared to be UGC.** This included one premium/subscription service on which all other content appeared to be provider content.

## Over three quarters of services facilitated user-to-user interaction

We assessed the extent to which each service in the top 100 facilitated user-to-user interaction. We found that 76% of services in the top 100 allowed some form of user-to-user interaction. The true figure may be higher, as this does not include services we could not access (for example, premium/subscription services requiring an account to enter) that did not otherwise indicate (such as in terms and conditions) what forms of user interaction were available on the service.

Generally, user-to-user interaction was offered in the following forms (with some services offering multiple forms of interaction):

- Likes/dislikes (54% of services) the ability to react to a video clip, image or any other piece of content by a 'thumbs up' or 'thumbs down'
- **Comments** (48%) the ability to post written remarks about a piece of content on the same page as that piece of content
- **Live chat** (23%) the ability to interact with other users (including performers/ creators) in real time for example, in cam 'rooms'
- **Private/direct messaging** (47%) the ability to send a message privately to other users (including performers/creators) outside of the context of a live chat<sup>20</sup>
- Ratings (7%) the ability to react to a piece of content using a star rating system or similar
- Forum (8%) a discussion board where users can post written remarks and other content

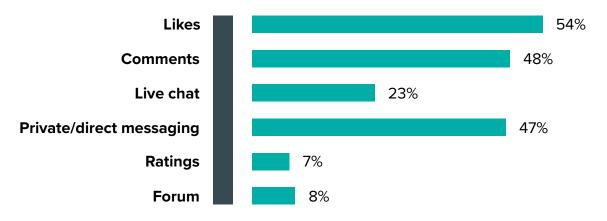


Figure 4
Source: BBFC analysis

User interaction was very common on **tube services**, with 94% (44 services) offering some form of user interaction.

User interaction was present on 100% of **cam services** (14 services), as private/direct messaging and live chat are essential components of the 'camming' functionality.

We noted user interaction on 70% of **premium/subscription services** (seven services), but were unable to make a determination regarding the remaining 30% of those services (three services) due to access being limited without an account.

User interaction was least common on **aggregator services**, being offered by only 28% of such services (five services).

# Regarding provider content, we found that 37% (11 services) of the 30 services that we noted as carrying provider content facilitated some form of user interaction.

We were unable to make a determination regarding user interaction on an additional two provider services as an account was required in order to access the services' full functionality. The forms of user interaction we noted on the 11 services are set out in the table below.

Service ranking	Primary functionality	Forms of user interaction
#30	Aggregator service	Likes Comments
#37	Pornographic gaming service	Forum Private/direct messaging
#41	Aggregator service	Live chat Private/direct messaging

#52	Celebrity nude service	Comments Forum
#55	Tube service	Likes Comments Private/direct messaging
#58	Aggregator service	Likes
#71	Premium/subscription service	Comments Private/direct messaging
#84	Aggregator service	Likes
#86	Premium/subscription service	Likes
#98	Pornographic gaming service	Private/direct messaging
#100	Aggregator service	Likes Comments Live chat Private/direct messaging

Figure 5
Source: BBFC analysis

## Private/direct messaging was offered by nearly half of the services

As noted above, we identified that 47% of services in the top 100 offered private/direct messaging functionalities.

In addition to all 14 cam services, private/direct messaging was offered on 22 tube services and on at least six premium/subscription services. We were unable to make a determination in relation to all premium/subscription services, as the information was not always readily available without signing up for an account. Private/direct messaging was also offered on two pornographic gaming services, one erotic fiction service, one aggregator service and one image-sharing service, bringing the total to 47 services.

Private/direct messaging was often offered as an incentive for users to sign up for an account on the service. It was also promoted as a way for creators to generate more engagement (and more revenue) from their viewers.

#### Many services enable users to message other users, as well as performers/creators

Of the 47 services offering private/direct messaging functionalities, we noted that 22 services enabled users to exchange messages with one another and 37 services enabled users to exchange messages with performers/creators. 17 of these services enabled both interaction between users and interaction between users and performers/creators. A total of 42 services were offering one or both of these forms of user interaction. The remaining five services indicated private/direct messaging functionality in their terms and conditions but we were unable to determine the specific form any such messaging took on those services.

# Section 2: User Journey and Age Assurance

This section considers the experiences that users have when accessing online pornography services. It includes looking at steps users go through between first accessing the service and first encountering pornographic content and any provisions services have in place to determine whether users are aged at least 18, such as age-assurance or age-verification mechanisms.

# The Bill states that "age assurance" means measures designed to estimate or verify the age or age-range of users of a service'21

Ofcom has also set out a definition of age assurance in its guidance for video-sharing platform providers:

'A broad term that refers to the spectrum of methods that can be used to be informed about a user's age online. The term may also be used to refer to the level of confidence that a platform has in the age of its users.

Examples of age assurance cover a range of potential methods, from users self-declaring their date of birth to age estimation techniques such as the use of face-recognition biometrics and computational methods. Other forms of age assurance may include trusted sources that point to a child's age, such as parental verification tools.'22

## A form of age assurance was present on 37% of services in the top 100

The age-assurance mechanism was generally presented in the form of a landing page or dialog box that provided a warning that the service contained adult content and required the user to either select a tickbox or click a button to confirm that they were aged 18 or over.

On 76% of the 37 services with a form of age assurance (28 services), no pornography was visible until the age assurance had been passed. In such cases, the content was generally blurred or otherwise obscured in order to mask the nudity and/or sexual activity. On the remaining 24% of the 37 services with age assurance (nine services), pornographic content was clearly visible alongside the age-assurance mechanism, either because the content was insufficiently blurred/obscured or because no effort had been made to blur/obscure it. Four of the 37 services were fully navigable without any need to interact with the age-assurance mechanism.

One of the 37 services required users to sign up for an account before accessing any pornographic content. More commonly across the top 100 services, accounts are offered for users who wish to unlock the full functionality of a service, though pornographic content is readily accessible without taking this step. Of the 74% of services in the top 100 that allowed users to upload or stream content, the vast majority of them (96%, 71 services) required users to sign up for an account before allowing them to upload content.

Accounts were offered on 79% of services in the top 100. 'Added value' functionality that was offered to encourage users to sign up for an account included the ability to:

- Upload videos
- Download videos
- 'Favourite' videos or performers, or to make 'playlists'
- Post comments
- Message with other users, including performers/creators

Of the 79 services which enabled users to make accounts, 24% (19 services) offered users the option to sign up for an account via an existing account with another service. The most commonly offered option was sign-up via Google (17 services), though other options included Twitter (five services), Pornhub (two services), Reddit (one service) and Windows (one service). Five services offered multiple options.

On two services, users would have to search for content before encountering any porn. They offered just a search bar that users could use to search for the type of content they were interested in seeing.

## Self-declaration was by far the most common form of age assurance

Ofcom's guidance for video-sharing platform providers on measures to protect users from harmful material defines **self-declaration** as:

'Where a user states their age or date of birth but offers no further evidence to confirm the information. This is a measure that is easy to bypass by the user, who is able to enter the minimum age that allows access to a service that may carry age-inappropriate or harmful material for the actual age of the user.'<sup>23</sup>

Of the 37% of services that required some form of age assurance, in all but one case the age assurance relied on a user's self-declaration. No further evidence was required to support a user's claim that they are aged 18 or over.

### One service appeared to offer a more extensive form of age assurance

Though we were unable to test and verify the efficacy of the measures in place without signing up for an account, information published on the service sets out a process involving a combination of age-estimation technology and the provision of identity documents to ensure that users are aged 18 or over.

# Services often required age/identity verification before allowing users to upload or stream content

Services' published age-assurance requirements were more robust in relation to users seeking to upload or stream content when compared with their requirements regarding users simply visiting the service to view content.

32% of services that allowed users to upload or stream content (24 services), including 100% of cam services (14 services), noted that performers/creators must be adults and required users to provide evidence to verify their age and identity before they could upload/stream any content.

For example, a leading tube service stated in its terms and conditions that in order to upload content to the service, users must submit high-resolution images or scans of at least one or two information documents, including the user's date of birth, photo, full legal name and address and the expiration date of the ID. Documents mentioned that would be acceptable included a passport, a citizenship card, a state or national ID and a utility bill.

A leading cam service listed, amongst other information required to become a performer, that users must submit 'identification information' including their full name, date of birth, gender, country, nationality, and upload an official document such as an ID card, passport or driving licence.

# Section 3: Business Information

This section considers questions relating to how online pornography services operate as businesses. It includes consideration of the relationship between a service and any parent company, indicators as to how the service is funded, different forms that 'content partner programs' (or similarly termed arrangements) take on pornography services, the means of upload/publication under such arrangements and consideration of where services are based.

## Some companies owned a number of services in the top 100

We made an assessment of each service's parent company by reviewing documentation such as the service's Terms and Conditions, Privacy Policy or Digital Millennium Copyright Act (DMCA) statement. Such documentation was not always available, and so we were only able to make a determination in relation to 55% of the top 100.

We identified 38 different parent companies. The most prominent company had eight services on the list, followed by a company with four services. No other company appeared to own more than two of the services we could make a determination about.

## Services were most commonly funded by advertising

Advertising was present on 68 services (including banner or pop-up ads, or video ads at the start of clips), indicating that the service was primarily or at least partially funded by advertising revenue. Often the advertisements themselves were pornographic – for example, promoting other services or particular brands, or promoting sex-related products such as sex toys.

Advertising was present on all 47 tube services. Some tube services published information that made it clear that content creators would earn a proportion of the advertising revenue generated by their videos. We were not able to identify such terms on every tube service, however.

Advertising was also present on a majority of aggregator services (12 out of 18 services). It was not clear from any of these services whether advertising revenue was

shared with the creators whose videos appeared on the services.

#### We noticed that cam services generally did not carry any obvious advertising.

Revenue was instead generated by users paying to engage with the performers, with the service taking a percentage of the earnings. This percentage varied depending on the service, with one leading cam service offering the performer an 89% share after 'processing fees, taxes and other expenses' and another offering 'over 50%'. One service offered an 'up to 100% share' for performers, but there was no further information provided about these terms. **All 14 cam services in the top 100 seemed to offer some variation on a revenue-sharing arrangement.** 

**16% of services offered paid-for content.** This includes the 10 services we identified as primarily premium/subscription services, as well as two cam services, two pornographic gaming services and two voyeur services.

On six services (five aggregator services and one pornographic gaming service), we did not notice any indicators to suggest how the service was funded.

### 24% of services in the top 100 offered a 'content partner program'

A content partner program (or similarly termed arrangement) is a way for content creators and/or pornography production companies to partner with a pornography service in order to promote their content on the service. As noted in section 1, there is some evidence to suggest that content partner programs are associated with the 'channels' that are commonly used by production companies in order to display their content on (primarily) tube services.

Though content partner programs were most commonly offered by tube services, we also noted two premium/subscription services and one cam service offering such programs.

We looked at the information published about a range of content partner programs. The level of detail provided varied quite considerably, even amongst the most highly ranked services, but content partner programs were generally promoted as a way for production companies and content creators to reach a wider audience and maximise the impact their content has on (primarily) tube services. By showcasing content on free-to-access services, content partners are able to promote their brand and drive traffic to their own premium/subscription service in order to convert viewers of 'free' content into paying customers.

Information on different services offering content partner programs mentioned a range of benefits to the potential content partner, including:

 Income to be gained from entering into the content partner program and uploading content (such as a proportion of the advertising revenue generated by that content)

- Numbers of user visits to the service per day (sometimes quoted in the millions and emphasising the global reach of the service)
- Advertising space the content partner's channel would benefit from
- Dedicated account representatives
- Exposure across a range of related pornography services

# Public information on the upload process for content partners was limited

As we did not sign up for any accounts, the extent to which we were able to investigate upload processes – under content partner programs or otherwise – was limited. From what we read, we did not see anything suggesting the upload process under a content partner program would be significantly different to the upload process for any other user of a service who is able to upload content. The difference is the prominence that a content partner's content is given on the service. For example, a content partner may be able to operate their own branded 'channel', which users can subscribe to.

# Content partner programs suggested UGC – though existing business connections might change that definition

It seemed to us logical that content partner programs would be indicative of UGC rather than provider content. As noted, provider content is 'pornographic content that is published or displayed on the service by the provider of the service or by a person acting on behalf of the provider'. By definition, content partners are not the provider of the service or a person acting on behalf of the provider: they are a third party, partnering with the service, to publish content for mutual commercial benefit.

The challenge here is the question highlighted earlier – namely, if the content partner is a pornography production company owned by the same parent company as the service, does this mean that the content is UGC or provider content?

## Most services in the top 100 were based outside the UK

As with the parent companies, we made an assessment of where each service was based by reviewing documentation published on the service. It should be noted, however, that there is no guarantee that services' own claims about their countries of origin will be accurate. Furthermore, services may have footprints in multiple territories, and so it was not straightforward to establish a base of operations with any certainty. We found in reviewing services' documentation that a number of services listed multiple addresses, and so we counted these services more than once.

As noted in the methodology section, the services were assessed based on what was stated by the service itself in their terms and conditions, privacy policy or other documentation published on the service.

Of the 60 services within the top 100 that we were able to make a determination on:

- 24 services claimed to be based in Cyprus (one of which claimed also to be based in the USA)
- 12 services claimed to be based in the USA (one of which claimed also to be based in Cyprus, two of which claimed also to be based in the Netherlands, one of which claimed also to be based in Czechia [stated on the service as Czech Republic], one of which claimed also to be based in the UK, and one of which claimed also to be based in Ireland)
- Six services claimed to be based in the Netherlands (two of which claimed also to be based in the USA)
- Four services claimed to be based in Czechia (one of which claimed also to be based in the USA)
- Four services claimed to be based in Belize
- Three services claimed to be based in the UK (one of which claimed also to be based in the USA)
- Other locations noted were the British Virgin Islands and Luxembourg twice each, and Anguilla, Bulgaria, the Commonwealth of Dominica, Costa Rica, France, Ireland, Poland, Romania and Spain once each



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