

1. Introduction

Direct Broadcast Satellite (DBS) service providers enter into programming agreements with content owners, having hundreds of agreements in place at any given time. Some agreements are more complex, while others less so, but all include limitations that the “licensor” imposes upon the “licensee”. The following paragraphs describe key relevant terms of current agreements for the most popular programming as seen by DBS service providers’ subscribers, categorized as follows:

- Approved services / service tiers
- Specific content for which rights are granted
- Approved distribution paths / territories
- Approved devices
- Content security
- Branding and user experience restrictions
- Advertising
- Transactions and usage reporting
- Metadata
- Regulatory compliance

2. Approved services / service tiers

Rights granted typically include a mix of the following services:

- linear channels, via satellite to STB
- on demand, via STB (includes “push” to DVR via satellite, and “pull” via broadband or satellite)
- start over / look back, via STB (via broadband)
- linear streaming in-home (proximity check using STB/home network) and/or authenticated out-of-home via devices (on service provider’s app and/or website)
- authenticated on demand streaming and/or download via devices (on service provider’s app and/or website)
- start over / look back in-home and/or out-of-home via devices (on service provider’s app and/or website)
- authenticated (linear and/or on demand streaming and/or download, using content owner’s app and/or website)
- place-shifted content, streaming and/or download in-home and/or out-of-home and/or streaming via STB (or an external transcoder device) to devices (on service provider’s app or website)

Often, rights for devices (often referred to as TV Everywhere, authentication or TVE) are predicated on the service provider agreeing to carry the corresponding linear channels via satellite.

License fees for rights are typically paid on a per subscriber – per month basis for the full set of rights granted (and not broken out, for example, as separate fees for linear and for TV Everywhere rights).

The approved device list can be restricted by a content owner, for example if it granted exclusivity for its content on a particular device (e.g. a specific game console). A service operator can typically limit which devices it will support as well, for example for cost reasons.

[Noteworthy: A service provider is motivated to deliver content to its subscribers through all approved devices. A service provider (and a service provider's subscriber) is harmed if the available content is artificially limited, e.g. by a 3rd party device that is incapable of, or chooses to not, present all available services (example: a 3rd party DVR that doesn't offer a Start Over feature). Furthermore, a service provider may be liable if a 3rd party device makes content available to a device that is restricted by the content owner.]

Often, a content owner will require a channel to be included in discrete packages (e.g. "DIRECTV Choice").

Rights are typically granted for both HD and SD versions of content. While 3D content and UHD (4K) content isn't as prevalent, rights models for these have generally followed these same general practices.

Different rights may require differing "availability windows" that a service provider must honor. For example, a start over program is only available to be started while the program is currently airing, and an on-demand program's availability will have a specific expiration date.

[Noteworthy: A service provider can be in violation of a programming agreement and incur potential liability if content is available beyond its availability window, so a 3rd party DVR must be able to expire applicable content...or if unable to then it cannot make the content available.]

3. Specific content for which rights are granted

A content owner may have channels or programs that do not get included in a programming agreement with a service provider. The service provider may (temporarily) not have available capacity for the content, or the service provider and content owner may be (temporarily) unable to agree on business terms for carriage of the content.

Often, a content owner will bundle all of their channels for distribution under a programming agreement (less popular channels and programs are bundled with such content owner's most popular channels and programs).

[Noteworthy: A service provider can be in violation of a programming agreement and incur potential liability if the full bundle of content is not available via all devices, including a 3rd party device.]

Due in part to “upstream” agreements that content owners may have or other rights restrictions, the mix of programs available at a given time via on-demand is typically different than the totality of programs delivered via linear satellite at a given time. Also, a linear stream via broadband may not include all of the same programs as its linear channel counterpart delivered via satellite (e.g. a particular program may be blacked out or a replacement program may be used).

A content owner typically can request a take-down of content by the service provider, in response to myriad factors such as court order, a copyright concern or a news event/emergency.

[Noteworthy: the specific channels and content available from a service provider is highly dynamic, and some changes occur with only a few days or hours of notice.]

4. Approved distribution paths / territories

Agreements describe the approved signal distribution path for each service type (for example, delivery via satellite for linear services to STBs). For services delivered for which broadband delivery is approved, the types of IP networks allowed are often described and/or restricted (e.g. distinguishing a “data plan” available via a mobile carrier from a video service available via that carrier).

Approved subscriber types for services can include single family homes, multi-dwelling units, and a variety of commercial establishments (e.g. restaurants, hotels, hospitals, schools, business offices). Different mixes of services are often available or restricted depending upon the subscriber type.

Services are typically limited to a territory, e.g. the US or (for a local channel rebroadcast) a Nielsen DMA. For satellite services, where the transmit beams are acknowledged to “spill over” into adjacent territories, additional obligations may include limiting a subscriber account billing address to within the territory. For broadband delivered services, a service provider can be required to take specific steps that ensure that recipients are within the territory (e.g. geofiltering via its distribution service agreements with Content Delivery Networks, or CDNs).

Blackouts may apply to a particular program such as a sporting event. Sometimes, a program that is blacked out on one service in a geographic area is available on another service in that area (due to team and league rights offered at local, regional and national levels). Typically blackout information is known at least a few days ahead of time. However, blackouts can often occur in real time (for example when a sporting event runs into overtime).

[Noteworthy: a service provider can offer a “game finder” feature that tunes automatically to a game on a channel that the subscriber is authorized for in his geographic region. This feature is ineffective or frustrating if the authorized channels are not known e.g. by a 3rd party device.]

Some services are restricted in agreements to “in-home” use only. Satellite providers ensure in-home use through proximity checking, for example in which the device ensures it is on the same home WiFi network as an authorized STB before service playback can begin. Cable and Telco

providers with closed IP networks have additional mechanisms available to ensure service playback is occurring in-home.

[Noteworthy: an authenticated communications path with a 3rd party device is needed to ensure the playback is occurring in-home.]

Content owners will typically grant rights only for the service provider's owned, controlled and "branded" websites and applications (e.g. directv.com).

5. Approved devices

Agreements describe the approved devices for each service type. Devices include STBs and consumer devices e.g. laptop PCs, desktop PCs, iOS and Android phones and tablets, game consoles, and connected (aka "smart") televisions.

For a device to be approved, a content owner may require it to use an approved Conditional Access System (CAS) or Digital Rights Management (DRM) system, which often impose specific requirements on devices, e.g. to be running recent operating system versions. Devices can be approved for SD services only, or for both SD and HD services.

For a device to be approved for certain content (e.g. live, start over / look back), a content owner may require that it supports Nielsen, comScore and/or other such viewing usage measurement functionality.

Devices that have video inputs (e.g. able to receive and playback content from the Internet) can be required to incorporate watermark detection designed to inhibit playback of pirated content e.g. Verance.

Devices that have video outputs typically must implement approved content protection technologies (examples include DTCP and HDCP). These implementations subject a device to specific obligations for robustness, compliance rules, acceptable of "system renewability messages" as well as subject the device manufacturer to agree to specific technology licensing terms.

Devices must often be able to pass through or generate (as applicable) copy control information on outputs. This CCI includes settings such as "copy never", "copy once" and "copy freely" that are designed to impact downstream device behavior.

[Noteworthy: FCC regulations included a mapping of most-restrictive CCI settings and business models, known as "Encoding Rules", which were vacated in January 2013 by the DC Circuit. Today, CCI settings are agreed upon in programming agreements between content owners and service providers. 3rd party device manufacturers want these settings to be uniform across different content and service providers.]

6. Content security

A content-owner-approved CAS vendor must be used: examples include NDS/Cisco, Nagra, Arris and many others.

A content-owner-approved DRM solution must be used: examples include Microsoft, Adobe, Verimatrix, Widevine and many others.

More secure solutions are often required for HD content vs. SD content (e.g. implementations using hardware-enforced security mechanisms) and for the type of content (e.g. on-demand versus pay-per-view).

Usage rules must be enforced for example:

- (device registration): devices must be registered to a subscriber account
- (number of devices): no more than X devices may be registered to a subscriber account at any given time
- (concurrent streams): no more than X concurrent streams of a content owner's programs might be allowed to devices registered to one subscriber account.
- (concurrent downloads): no more than X downloads of a content owner's programs might be allowed to devices registered to one subscriber account.

Many deeply technical details for security can appear in agreements, including:

- minimum encryption strength (e.g. AES)
- behavior with "jailbroken" devices
- user authentication methods (e.g. user ID and passwords of sufficient complexity)
- copy control settings (e.g. "copy never")
- geofiltering techniques for IP-based delivery
- facility protection (e.g. firewalls for content servers, physical access limitations), confirmed through briefings and 3rd party audits
- non-interference with content provider watermarks included with delivered content

Operational mechanisms allowing a content owner and service provider to jointly manage the secure distribution of content can appear in agreements, including:

- definitions of security threats of varying magnitudes: e.g. "security breach", "security flaw"
- monitoring requirements and meeting debriefs,
- withholding of content to particular devices or subscribers e.g. upon content owner demand
- reinstatement of content after security issues resolved, and termination of programming agreement provisions if not resolved.

[Noteworthy: Programming agreements are designed to align content owner and service provider interests in protecting programming from ever changing security threats. As a result, content owners and service providers are able to cooperate closely and take coordinated actions to more effectively address security.]

7. Branding and user experience restrictions

A content owner may require a channel to be available alongside other similar channels from other content owners (e.g. “channel neighborhoods”), for example by assigning nearby channel numbers.

A content owner will also often require that its programs be kept apart from other programs, for example by disallowing subscriber searches and recommendations from bringing up lists that include both adult programs (e.g. “X-rated”) and that content owner’s programs.

It is a common practice for a content owner to restrict the nature of the information that can be presented on a (graphical) user interface when its content is being presented.

- No overlays (unless first initiated by a subscriber, e.g. by pressing a remote control button).
- The information in an overlay might be precluded from including advertising
- The information in an overlay might be precluded from having a relation (e.g. in genre) to the channel then tuned or program then being displayed. (For example, a listing of other sporting events that are available when a customer is already watching a sporting event and presses “guide” cannot be displayed by default; the customer would rather have to specifically request that listing through additional guide navigation.)

Programming agreements typically include provisions regarding the use of the content owner’s brands/logos.

- A user interface on a device or STB must include the channel brand/logo when presenting information about a program from that channel (e.g. in lists of recordings, search and recommendations results).
- A service provider is often obligated to support rebranding / updated logo initiatives from the content owner.
- TV Everywhere agreements typically have requirements that content is presented via certain navigation paths (network branded pages) and that content owner brands/attribution is presented prior to content being allowed to commence playing.

[Noteworthy: through the use of remote user interface technology (e.g. RVU) and service provider applications, service providers can honor its branding / UI commitments on 3rd party devices.]

8. Advertising

Programming agreements include provisions regarding advertising inserted in programs, including commitments for available ad inventory and ad revenue sharing. In addition, many programming agreements include restrictions around advertising that may be inserted in or around programs (e.g., exclusive advertising categories, prohibition for certain types of advertisements).

To protect ad revenue, a content owner typically limits a service provider from giving subscribers tools that avoid viewing of advertising, for example:

- Disabling the “Fast Forward” remote control feature during advertising for services (e.g. Start Over / Look Back)
- Precluding automatic deleting of ads from DVR recordings of linear services

To improve ad revenues, targeting advertising is employed by DBS service providers and content owners using “Dynamic Ad Insertion” technology. DAI is implemented on DVRs in the case of satellite delivered content: performed in home, both when viewing live and during playback. DAI is also required by content owners to be implemented in CDNs, for streaming via broadband to devices.

[Noteworthy: advertising revenues are based on ad viewership, and a 3rd party DVR that does not support DAI effectively reduces shared content provider and service provider revenues, as well as potentially incurring liability for the service provider.]

Similar to branding requirements, content provider may require ads to be independent of the content being played and sold on a “blind” basis (i.e. with no visibility for the advertiser in terms of the programming during which the ads will appear).

9. Transactions and usage reporting

A service provider typically offers subscribers a number of ways to perform purchases of transactional content, e.g. a pay-per-view movie or boxing match. It might be ordered ahead of time through a website and/or phone call or instantly via the STB using the remote control.

Aside: The same mechanism is often used by service providers to allow a subscriber to manage his subscription packages, e.g. to add a sports league “season pass” or to add a premium movie channel.

Content owners require reporting from service providers of purchases within specific time frames (e.g. 24 hours for a PPV boxing match). Rights to audit these reports are typically granted to content owners.

[Noteworthy: a 3rd party device that doesn’t support any/all ordering mechanisms could reduce service provider revenues due to lost sales or inadequate reporting.]

Service providers are able to collect, subject to privacy regulations and user agreements, information about the viewing of programs by its subscribers. This information is used in myriad ways:

- Informs content owners and advertisers about total viewership (driving revenues)
- Feeds social features (e.g. a “What’s Hot” application, describing what programs are most popular)
- Helps a service provider optimize its network (e.g. driving a decision to “push” content that is more popular than expected, or replace a channel)

Content owners require reporting of usage/viewership of TV Everywhere content, provided via monthly reports as well as real time data feeds.

[Noteworthy: a 3rd party device that isn't integrated with a service provider's own usage reporting system reduces service providers' and content owners' abilities in all of these respects.]

10. Metadata

Programming agreements typically include content delivery specifications and points of contact for all content interfaces (e.g. satellite and fiber contribution feeds, VOD pitcher/catcher systems). These proprietary and regularly updated specifications include "metadata" about the channels and programs that is used to control service provider operations and subscriber messaging.

Examples of this metadata, which is typically delivered via XML formatted files, are:

- Listing Service ID (allows the service provider to use a listing service contract to obtain detailed information and assets, e.g. a thumbnail graphic, for a program)
- Availability windows (when a program's availability can be announced, when a program can be pushed to DVRs, start and stop dates, blackout rules, etc.)
- Trigger information for collecting programs (for example, a satellite provider might "real-time encode" a program from a linear channel and then use that program for start over / look back services)

Programming agreements include service level obligations as well, such as how far in advance this metadata must be shared.

[Noteworthy: this information is both dynamic and often not available via an independent listing service such as Tribune. Standards are not practical for this rapidly changing information, and a 3rd party device might have no other source than each service provider for some of this information.]

11. Regulatory compliance

Content owners and service providers are subject to obligations covering a number of regulatory topics ranging from accessibility and emergency response to decency. Obligations can affect content creation, delivery, and playback as well as consumer care; these may include specific reporting and complaint handling as well. As compliance typically requires end-to-end cooperation from content origination through end-user playback, and as non-compliance can result in government fines and/or revocation of operating rights, programming agreements address these regulatory topics.

- Closed captions for the hearing impaired. For virtually all programming, content providers must author, and service provider must reliably pass through and generate, captions for the hearing impaired.

- Video description for the visually impaired. Certain networks and popular cable channels must produce, and service providers must reliably pass through, video description on secondary audio program (SAP) channels for a minimum number of hours of programming per month.
- Emergency Alert System. Service providers must be able to interrupt programming to deliver emergency alerts conveyed through the government EAS. Furthermore, these alerts must be accessible.
- Parental controls. Content owners must insert ratings information and service providers must provide subscribers the capability to control viewing based on such information (sometimes referred to as “V-Chip”), e.g. for parents to manage viewing by their children.
- CALM Act. The loudness of commercial advertisements must be kept consistent with program audio loudness.

[Noteworthy: a 3rd party device that does not support these capabilities could expose a service provider to risk of regulatory non-compliance or some other liability to its subscribers.]