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Exhibit H

PRELIMINARY – This chart is an initial mapping prepared before discovery and prior to any Infringement Contentions.

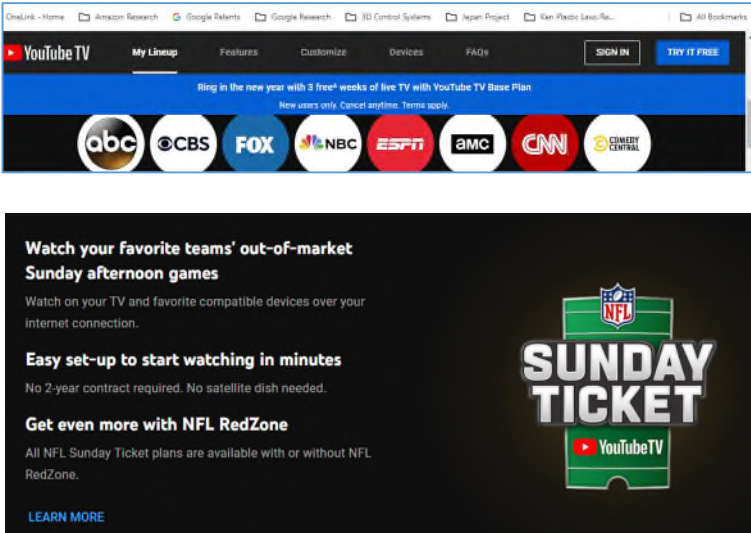
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U.S. Patent No. 8,595,778

Sandpiper CDN

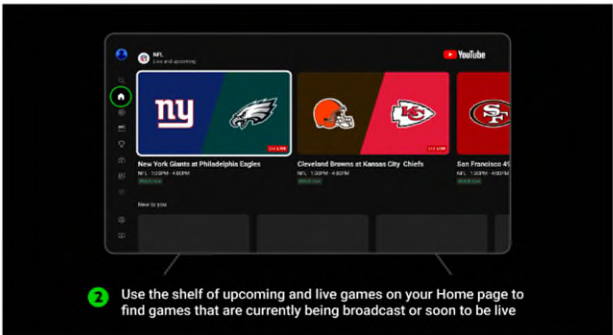
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8,595,778	Google CDN
1. A computer-implemented method for authorizing delivery of a video stream to an end user, wherein the video stream is associated with a content publisher, the method comprising:	Google uses and provides content delivery network(s) (“Google CDN”), including Google’s internal services and services Google offers to third parties that are used to provide content, such as webpages and/or video streams, over a network. Google CDN includes services such as YouTube TV, for example, along with Google’s own use of technologies to provide content in a network. As one example, YouTube TV provides a method for authorizing delivery of a video stream to an end user, wherein the video stream is associated with a content publisher. For instance, YouTube TV authorizes delivery of a video stream as part of an NFL Sunday Ticket YouTube TV subscription.  https://tv.youtube.com/welcome/
receiving a request from the end user for delivery of the video stream to the end user across a network;	Google receives a request from an end user, for example an NFL Sunday Ticket YouTube TV subscriber, for delivery of a video stream across a network. YouTube TV allows an end user to submit a request for delivery of a video stream, for example by selecting an icon to select an NFL game.

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	 2 Use the shelf of upcoming and live games on your Home page to find games that are currently being broadcast or soon to be live To start watching on your smart TV or streaming device: 1. Open the YouTube app > sign in with the Google Account that you used to purchase NFL Sunday Ticket. Learn how to download and sign in to the YouTube app on your TV. 2. Live and upcoming NFL games available in your area will show up on the Home tab and on the NFL channel page. You can find the NFL channel page by entering "NFL" in the search bar. a. If the game is live, select the game to start watching. b. If the game is scheduled for later, select the game > select Notify me to get an alert on your phone when the game is live. https://support.google.com/youtube/answer/13821595?hl=en								
querying a subscription database associated with the content publisher;	Google queries a subscription database, for example to determine if an end user has an active NFL Sunday Ticket YouTube TV subscription account. <table border="1" data-bbox="772 1036 1635 1302"> <tr> <td>snippet.resourceId</td><td>object The id object contains information about the channel that the user subscribed to.</td></tr> <tr> <td>snippet.resourceId.kind</td><td>string The type of the API resource.</td></tr> <tr> <td>snippet.resourceId.channelId</td><td>string The value that YouTube uses to uniquely identify the channel that the user subscribed to.</td></tr> <tr> <td>snippet.channelId</td><td>string The ID that YouTube uses to uniquely identify the subscriber's channel. The resource_id object identifies the channel that the user subscribed to.</td></tr> </table> https://developers.google.com/youtube/v3/docs/subscriptions	snippet.resourceId	object The id object contains information about the channel that the user subscribed to.	snippet.resourceId.kind	string The type of the API resource.	snippet.resourceId.channelId	string The value that YouTube uses to uniquely identify the channel that the user subscribed to.	snippet.channelId	string The ID that YouTube uses to uniquely identify the subscriber's channel. The resource_id object identifies the channel that the user subscribed to.
snippet.resourceId	object The id object contains information about the channel that the user subscribed to.								
snippet.resourceId.kind	string The type of the API resource.								
snippet.resourceId.channelId	string The value that YouTube uses to uniquely identify the channel that the user subscribed to.								
snippet.channelId	string The ID that YouTube uses to uniquely identify the subscriber's channel. The resource_id object identifies the channel that the user subscribed to.								

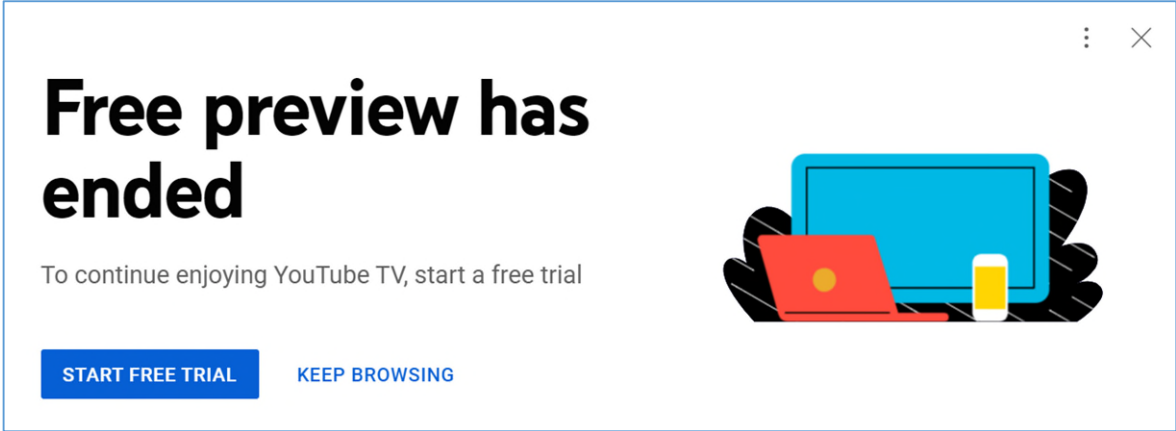
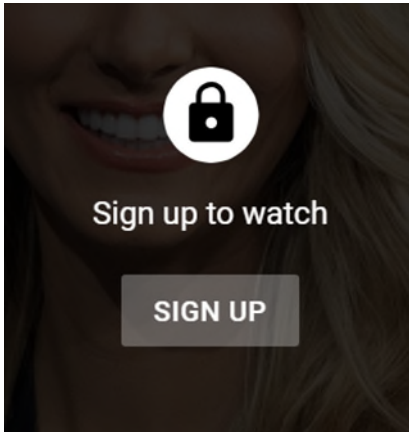
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	Google stores YouTube TV subscriber data in a Google database. Google Cloud provides an intelligent, open, and unified data and AI cloud built from the same underlying architecture that powers Google’s most popular, global products, like YouTube, Search, and Maps. Revolutionize customer experiences with operational databases you know and love, in virtually any environment whether in the cloud or on-premises. https://cloud.google.com/solutions/databases?hl=en
in response, processing a reply from the subscription database to determine whether the end user has authorization to receive delivery of the video stream; and	Google processes a reply from a subscription database. In one example, the Google CDN determines if an end user’s YouTube TV account is active or paused. Cancel or pause your YouTube TV membership You can cancel or pause your YouTube TV membership at any time. When you cancel or pause your membership, you'll still have access to YouTube TV until the end of your payment period. Canceling YouTube TV does not immediately remove your access to the service unless you are in a free trial. If you cancel during a free trial, you'll lose access to YouTube TV (including any add ons) immediately upon cancellation. If you'd like to cancel and remove access to YouTube TV right away, get in touch with our support team. https://support.google.com/youtubetv/answer/7129668?hl=en&co=GENIE.Platform%3DDesktop
performing at least one of: transmitting a notification to the end user indicating that the end user is not	Google transmits a notification to an end user indicating the end user is not authorized. For example, YouTube TV notifies an end user access to YouTube TV is not authorized to receive delivery of a video stream based on a reply from a subscription database. In some cases, YouTube TV’s restrictions cause a notification indicating an end user not authorized even when the end user is signed in to a YouTube TV account, based on a reply from a subscription database.

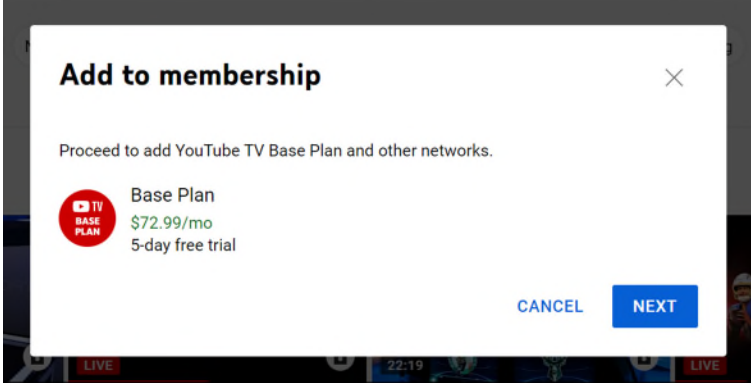
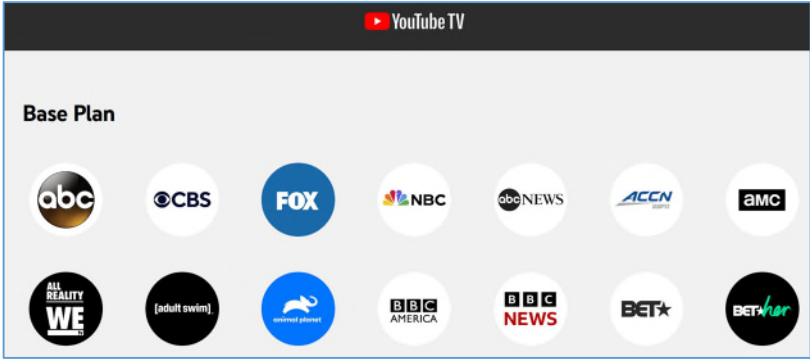
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authorized to receive delivery of the video stream based on the processing of the reply from the subscription database; and	A promotional banner for YouTube TV. It features the text "Free preview has ended" in large, bold, black font. Below it, in smaller text, it says "To continue enjoying YouTube TV, start a free trial". At the bottom, there are two buttons: "START FREE TRIAL" in white text on a blue background, and "KEEP BROWSING" in blue text on a light blue background. To the right of the text is an illustration of a blue laptop, a red laptop, and a yellow smartphone. https://tv.youtube.com/watch/PvX09GvM5wA?utm_source=fire&onboard=1&vp=0gEEEgIwAQ%3D%3D A dark overlay with a white padlock icon in a circle at the top. Below the icon, it says "Sign up to watch" in white text. At the bottom, there is a grey button with the text "SIGN UP" in white. https://tv.youtube.com/watch/PvX09GvM5wA?utm_source=fire&onboard=1&vp=0gEEEgIwAQ%3D%3D

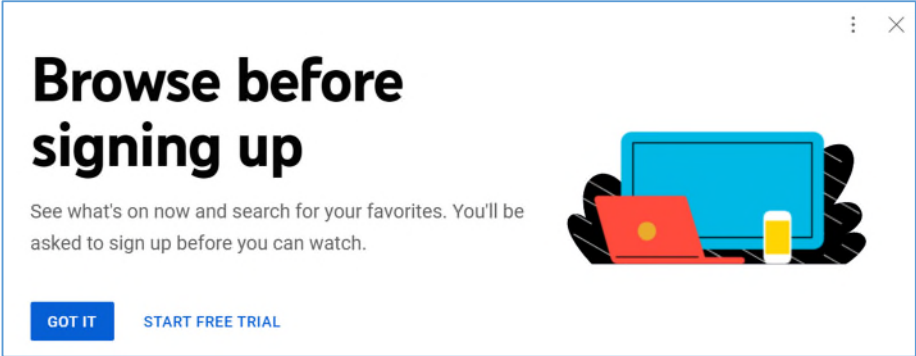
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	 https://tv.youtube.com/?utm_source=fire&onboard=1 As one example, when an end user selects a channel below, the end user receives the notification further below stating “You’ll be asked to sign up before you can watch.”  https://tv.youtube.com/welcome/#base-plan

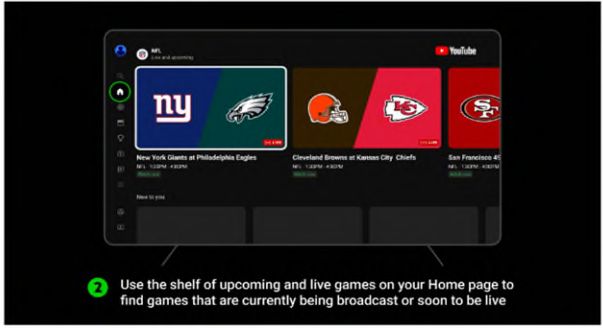
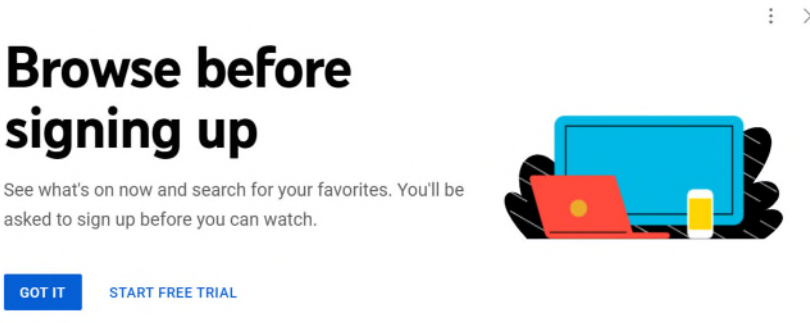
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8,595,778	Google CDN
	 https://tv.youtube.com/browse/UC2_XXeXYbABftxRRBCRjN7A Restrictions on YouTube TV Certain restrictions apply to YouTube TV. Keep reading for important details about availability and restrictions. Location restrictions • YouTube TV is only available in the United States. • Your current location will find which programs and networks you see. Your access may be limited based on where you're attempting to use YouTube TV. If you're traveling, you'll see the local channels from your current location. YouTube TV is not currently available outside of the United States. Learn more about location requirements and permissions and viewing restrictions on YouTube TV. https://support.google.com/youtubetv/answer/7300225?hl=en#zippy=%2Clocation-restrictions
initiating delivery of the video stream to the end user based on	Google initiates delivery of a video stream based on the reply from the database. For example, YouTube TV begins delivery of content after successful sign in, or during a period where the subscription database

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the processing of the reply from the subscription database, wherein the reply from the subscription database indicates the end user is authorized to receive delivery of the video stream.	indicates an end user is authorized to receive delivery of a video stream, such as during a preview or free trial.  Use the shelf of upcoming and live games on your Home page to find games that are currently being broadcast or soon to be live To start watching on your smart TV or streaming device: 1. Open the YouTube app > sign in with the Google Account that you used to purchase NFL Sunday Ticket. Learn how to download and sign in to the YouTube app on your TV. 2. Live and upcoming NFL games available in your area will show up on the Home tab and on the NFL channel page. You can find the NFL channel page by entering "NFL" in the search bar. a. If the game is live, select the game to start watching. b. If the game is scheduled for later, select the game > select Notify me to get an alert on your phone when the game is live. https://support.google.com/youtube/answer/13821595?hl=en  Browse before signing up See what's on now and search for your favorites. You'll be asked to sign up before you can watch. GOT IT START FREE TRIAL https://tv.youtube.com/browse/UCdudcFrjsgI28srMBGXMkhw

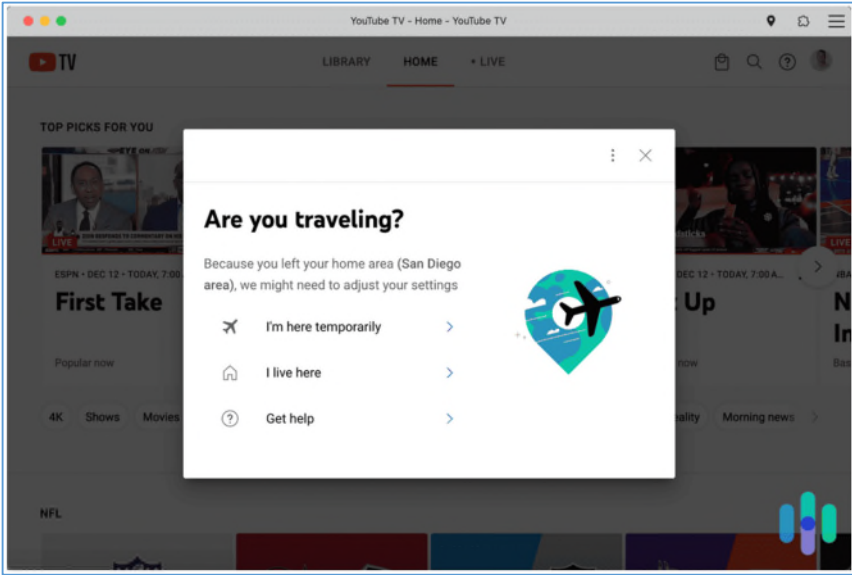
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4. The computer-implemented method as in claim 1 further comprising: processing proximity parameters associated with the end user, wherein the proximity parameters specify a geographic location of the end user to where video content is transmitted; based on the processing of the proximity parameters, determining that the end user is not authorized to receive the video stream; and restricting delivery of the video stream to the end user.	Google further includes processing proximity parameters associated with the end user. For example, YouTube TV provides processing proximity parameters associated with an end user that specify a geographic location of the end user, determining the end user is not authorized to receive the video stream based on processing the proximity parameters, and restricting delivery of the video stream to the end user. For example, YouTube TV processes proximity parameters when an end user has traveled outside of their home area and YouTube TV restricts delivery of a video stream to end users based on processing these proximity parameters. Google’s information about YouTube TV states “[w]hen you travel outside of your home area, you can’t watch local networks airing in your home area.” • If you travel outside of your home area, you can view local programs in the location you travel to, but you can’t record anything outside of your home area. When you travel outside of your home area, you can’t watch local networks airing in your home area. https://support.google.com/youtubetv/answer/7129768?hl=en&co=GENIE.Platform%3DDesktop

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	Restrictions on YouTube TV Certain restrictions apply to YouTube TV. Keep reading for important details about availability and restrictions. Location restrictions • YouTube TV is only available in the United States. • Your current location will find which programs and networks you see. Your access may be limited based on where you're attempting to use YouTube TV. If you're traveling, you'll see the local channels from your current location. YouTube TV is not currently available outside of the United States. Learn more about location requirements and permissions and viewing restrictions on YouTube TV. https://support.google.com/youtubetv/answer/7300225?hl=en#zippy=%2Clocation-restrictions 

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	https://www.security.org/vpn/change-youtube-tv-location/
7. The computer-implemented method of claim 4, wherein restricting delivery of the video stream to the end user is in accordance with subscription parameters of the content publisher for a group of end users, the subscription parameters including at least one of a time restriction and a geographic restriction, and wherein the end user is a member of the group of end users to which the subscription parameters apply.	Google's further provides restricting delivery of the video stream in accordance with subscription parameters including at least a geographic restriction. For example, YouTube TV restricts delivery of video streams in accordance with an end user being outside of the end user's "home area." • If you travel outside of your home area, you can view local programs in the location you travel to, but you can't record anything outside of your home area. When you travel outside of your home area, you can't watch local networks airing in your home area. https://support.google.com/youtubetv/answer/7129768?hl=en&co=GENIE.Platform%3DDesktop Restrictions on YouTube TV Certain restrictions apply to YouTube TV. Keep reading for important details about availability and restrictions. Location restrictions ^ - YouTube TV is only available in the United States. - Your current location will find which programs and networks you see. Your access may be limited based on where you're attempting to use YouTube TV. If you're traveling, you'll see the local channels from your current location. YouTube TV is not currently available outside of the United States. Learn more about location requirements and permissions and viewing restrictions on YouTube TV. https://support.google.com/youtubetv/answer/7300225?hl=en#zippy=%2Clocation-restrictions
9. The computer-implemented method as in claim 1, wherein processing the reply	Google further provides processing the reply from the subscription database, including detecting that an end user is not a subscriber, storing an entry indicating the end user is not an authorized subscriber, and transmitting a notification. For example, YouTube TV implements restrictions including based on current location, and Google detects and tracks verification data indicating that an end user is not an authorized

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from the subscription database comprises detecting that the end user is not a subscriber of the content publisher, the method further comprising: in a subscriber verification table, storing an entry indicating that the end user is not an authorized subscriber of the content publisher, and wherein transmitting a notification to the end user indicating that the end user is not authorized to receive delivery of the video stream comprises: specifying in the notification that the end user is not an authorized subscriber of the content publisher from which the end user had	subscriber (as one example, YouTube TV analyzes and/or logs user location data for restricting content, or location or other information is analyzed or stored for targeting ads). Restrictions on YouTube TV Certain restrictions apply to YouTube TV. Keep reading for important details about availability and restrictions. Location restrictions • YouTube TV is only available in the United States. • Your current location will find which programs and networks you see. Your access may be limited based on where you're attempting to use YouTube TV. If you're traveling, you'll see the local channels from your current location. YouTube TV is not currently available outside of the United States. Learn more about location requirements and permissions and viewing restrictions on YouTube TV. https://support.google.com/youtubetv/answer/7300225?hl=en#zippy=%2Clocation-restrictions

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requested delivery of the video stream.	Welcoming YouTube TV to Google Preferred Last year we launched YouTube TV, a new way to enjoy cable-free live TV. Now a year in, YouTube TV continues to gain momentum – we’ve recently added new networks to our service, expanded availability to over 85 percent of US households in nearly 100 TV markets, and announced partnerships with major sports leagues. For the first time, this upcoming broadcast season advertisers will be able to access full length TV inventory in Google Preferred. Content from some cable networks in the US will be part of Google Preferred lineups so that brands can continue to engage their audience across all platforms. This means advertisers will be able to get both the most popular YouTube content and traditional TV content in a single campaign – plus, we’ll dynamically insert these ads, giving advertisers the ability to show relevant ads to the right audiences, rather than just showing everyone the same ad as they might on traditional TV. As marketers continue to break the silos and think of holistic media plans, we’re excited to enable the opportunity. Because while TV screen viewing is big and growing fast, video is everywhere and the key is connecting with viewers wherever they watch. https://blog.google/products/ads/video-is-everywhere-helping-brands-find/
10. The computer-implemented method as in claim 1, wherein processing the reply from the subscription database comprises detecting that the end user is a subscriber of the content publisher, the method further comprising:	Google detects and tracks verification data indicating that an end user is not an authorized subscriber. For example, Google CDN stores YouTube history including YouTube TV authorized logins and/or viewing history, for instance for analytics regarding end-user viewing or clicking behavior. As another example, YouTube stores history indicating an end user is authorized.

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in a subscriber verification table, storing an entry indicating that the end user is an authorized subscriber of the content publisher.	Welcoming YouTube TV to Google Preferred Last year we launched YouTube TV, a new way to enjoy cable-free live TV. Now a year in, YouTube TV continues to gain momentum – we’ve recently added new networks to our service, expanded availability to over 85 percent of US households in nearly 100 TV markets, and announced partnerships with major sports leagues. For the first time, this upcoming broadcast season advertisers will be able to access full length TV inventory in Google Preferred. Content from some cable networks in the US will be part of Google Preferred lineups so that brands can continue to engage their audience across all platforms. This means advertisers will be able to get both the most popular YouTube content and traditional TV content in a single campaign – plus, we’ll dynamically insert these ads, giving advertisers the ability to show relevant ads to the right audiences, rather than just showing everyone the same ad as they might on traditional TV. As marketers continue to break the silos and think of holistic media plans, we’re excited to enable the opportunity. Because while TV screen viewing is big and growing fast, video is everywhere and the key is connecting with viewers wherever they watch. https://blog.google/products/ads/video-is-everywhere-helping-brands-find/

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	YouTube History Saves the YouTube videos you watch and the things you search for on YouTube to give you better recommendations, remember where you left off, and more. Learn more ☒ On TURN OFF Subsettings ☒ Include the YouTube videos you watch ☒ Include your searches on YouTube https://myactivity.google.com/product/youtube/controls
11. The computer-implemented method of claim 10 further comprising: receiving a second request from a second end user for delivery of the video stream to the second end user; processing the second request to determine that the second end user is authorized to receive delivery of the video stream; and	The Google CDN receives a second request from a second end user for delivery of a video stream, processes the second request to determine the second end user is authorized, and initiates delivery of the video stream to the second end user. For example, multiple end users request video streams, and the Google CDN determines a second end user is authorized. As one example, on information and belief, YouTube TV has over 8 million active subscribers including millions of end users who request delivery of a video stream from Google’s CDN by using YouTube TV.

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initiating delivery of the video stream to the second user.	
12. The computer-implemented method of claim 11, wherein processing the second request to determine that the second end user is authorized to receive delivery of the video stream comprises: determining that the second end user is the same as the end user; and in response to querying the subscriber verification table, determining that the second end user is an authorized subscriber of the content publisher.	The Google CDN processes the second request to determine a second end user is authorized, including determining the second end user is the same as the end user. For example, the Google CDN including YouTube TV uses information about a second end user to determine the second end user is the same as the end user and determines the second end user is an authorized subscriber, as discussed below.
13. The computer-implemented method of claim 11, wherein processing the second request to determine	As one example, the Google CDN uses a cookie or token to determine a second end user is the same as the end user.

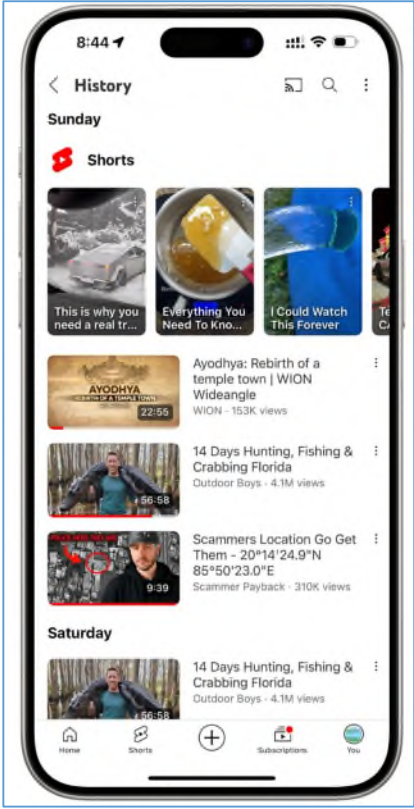
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that the second end user is authorized to receive delivery of the video stream includes analyzing at least one of a token and a cookie, wherein the at least one of a token and a cookie is associated with the second request received from the second end user.	Personalisation settings and cookies We use cookies to deliver and maintain Google services, track outages and protect against spam, fraud and abuse, measure audience engagement and site statistics to understand how our services are used and enhance the quality of those services. We also use cookies to support personalisation settings that let you choose how to use Google, even when you're signed out. YouTube History Get features like YouTube homepage recommendations based on your activity, like the videos that you watch and the things that you search for. When this setting is off, YouTube features that rely on history to personalise your experience are disabled.  https://consent.youtube.com/d?continue=https://www.youtube.com/%3Fcbid%3D1&gl=BE&m=0&pc=yt&hl=en-GB&src=2
14. The computer-implemented method of claim 10 further comprising: in the subscriber verification table, storing session information associated with the delivery of the video stream to the end user, wherein the session information is stored in accordance	The Google CDN stores session information associated with delivery of a video stream to an end user in accordance with a relative time at which the request was received. As one example, YouTube watch history includes session information associated with delivery of a video stream, such as a list of videos watched by an end user associated with a relative time (e.g., “Sunday,” “Saturday”).

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with a relative time at which the request from the end user was received.	 https://www.idownloadblog.com/2024/01/30/how-to-see-and-delete-youtube-watch-history/

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