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Skip Button for Uninteresting Irrelevant Content Segments

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Skip Button for Uninteresting Irrelevant Content Segments

ABSTRACT

Many audio and video playback applications include functionality to skip over parts of the content being played. However, such controls skip predetermined duration of content and can inadvertently lead users to skip over content portions of interest. This disclosure describes techniques that automatically determine locations and lengths of uninteresting or non-information segments in content based on user interests and context, obtained with permission. Users are provided with a suitable user interface (UI) mechanism to skip over to the next moment of interest within the content. If the user permits, data on the portions that were skipped can be aggregated and made available to content creators to help them understand user engagement with their content.

KEYWORDS

- Audiovisual content
- Skip button
- Content skipping
- Content personalization
- User context
- Contextual understanding

BACKGROUND

Users often find that some of the parts of audiovisual content they view online are irrelevant and/or uninteresting for them. For instance, users may find that segments not central to the core topic of a video are less important and engaging. Some examples of such content include long spells of laughing, crying, singing, babbling, speaking about information that does

not fit the context or user interest, etc. Although users are interested in viewing the content, they benefit from being able to skip over the segments they find irrelevant and/or uninteresting.

Many applications for playing audiovisual content include functionality to skip over parts of the content being played. Typically, such functionality is provided via interactive user interface (UI) elements such as buttons and/or scrollbars for moving the content stream forward or backward, skipping forward or backward by a set amount of time (e.g., 10 seconds) from the current position, changing the speed to increase or decrease the playback tempo (e.g., by one of several set options such as 0.5x, 1.25x, 1.5x, 2x, etc.), etc. However, users are limited to the specific intervals of skipping time and the available options for adjusting playback speed that are included in the application, with no possibility of adjusting their values. As a result, using controls provided within the application can inadvertently lead users to skip over content pieces of interest if these are obscured when operating the controls. Users sometimes end up moving back and forth within the content stream when attempting to skip over an uninteresting segment to the moment within the stream where they wish to continue playback.

Moreover, users must perform the skipping operation manually. Although speech-to-text (STT) technology is often applied to provide live captions for audiovisual content, non-speech content is typically summarized with single words, such as “laughter,” “singing,” etc. The summarized captions are inadequate for automatically detecting whether a user is likely to find the underlying content segment uninteresting or irrelevant. Content providers can learn about user interests based on various pieces of user-permitted information such as their online profiles, content search and/or viewing histories, specified preferences and likings, etc. However, current applications do not include functionality to determine content segments that a user is likely to wish to skip over based on the user’s interests and/or context.

DESCRIPTION

This disclosure describes techniques that enable users to skip over segments of content they find uninteresting and/or irrelevant when viewing audiovisual content. The option to skip such segments is provided as a suitable UI element, such as a button within applications used to play audiovisual content. The locations and lengths of segments within the content at which the user is likely to wish to skip over to the next part of interest can be determined automatically based on user interests and/or contextual information obtained with user permission. For example, an aspiring actor watching a video of an interview of a star actor to learn about his training and preparation can be provided the option to skip over interview segments in which the star actor talks about his favorite foods and travel destinations since the aspiring actor is likely to be uninterested in those details.

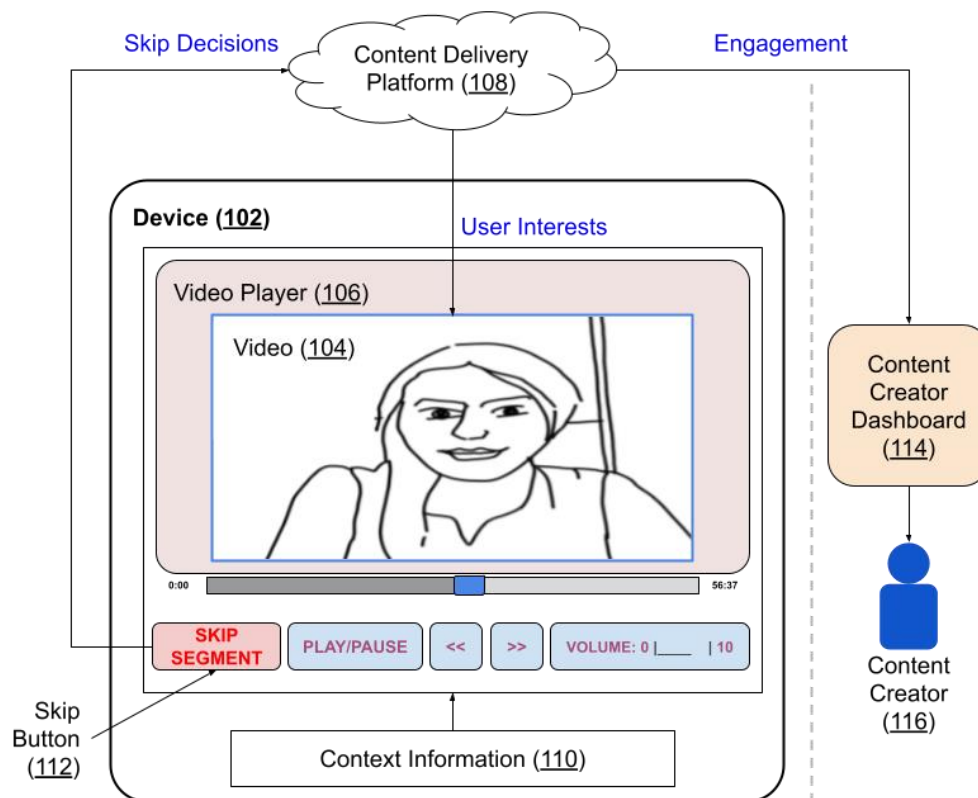


Fig. 1: Enabling users to skip likely irrelevant and/or uninteresting content segments

Fig. 1 shows an example of operational implementation of the techniques described in this disclosure. A user is watching a video (104) of an interview within a video player application (106) on a device (102). With the user's permission, information about the user's interests obtained from the content delivery platform (108) (e.g., video hosting service) and/or relevant contextual information obtained from the device (110) are relayed to the application. The information is used to identify segments within the interview that are likely to be irrelevant to the user's current interest in watching the video. Whenever such a segment begins, the user can choose to skip over it with a skip button (112) within the UI that moves the video forward to the next part of the interview that fits the user's interests.

With the user's permission, the user's decisions about skipping over specific segments of the interview based on the interaction with the skip button, which represent the user's engagement with the video, are provided to the content delivery platform. Subsequently, such engagement data can be aggregated and made available with permission to the content creator (116) via a dashboard (114) that shows information regarding user engagement with the content. Content creators can use the information to understand where user engagement of their target audiences tends to drop and apply that insight in the creation of their future content.

The techniques described in this disclosure can be implemented within any applications, platforms, or devices such as computers, smartphones, tablets, smart speakers, smart glasses, augmented reality (AR) or virtual reality (VR) headsets, etc. The techniques support skipping uninteresting and/or irrelevant segments within audiovisual content of any type, such as videos, podcasts and other audio, presentations with accompanying slides, audiovisual blog and social media posts, etc. In addition to visual UI elements, skipping uninteresting portions can also be

initiated via another suitable mechanism, such as a voice command or application programming interface (API).

The techniques can additionally be applied with permission to enable users to skip likely irrelevant and/or uninteresting pieces within text-based content, such as news articles, text posts on blogs and social media, etc. The functionality for automatically determining likely locations and lengths of content segments a user is likely to skip can be included with the content playing application (as indicated in Fig. 1). Alternatively, the functionality can be implemented locally on the user's device or, with user permission, externally on a cloud platform or a server. The content can be stored locally on the device or streamed via an online content delivery platform or cloud service. With user permission, available contextual information can be utilized. For instance, if users permit, a user's gaze obtained via smart glasses or AR/VR headsets can be used when determining their likely interest in the current segment of the content being played.

Implementation of the techniques described herein can enable users to skip over any content segments that are uninteresting and/or irrelevant, helping users focus on consuming only the desired parts of the content. Users can thus skip seamlessly and avoid cumbersome back-and-forth adjustment of the content playback stream to find the next point of interest within the content, thus enhancing the efficiency and user experience (UX) of consuming the content.

Further to the descriptions above, a user may be provided with controls allowing the user to make an election as to both if and when systems, programs or features described herein may enable collection of user information (e.g., information about a user's social network, social actions or activities, profession, a user's preferences, or a user's current location), and if the user is sent content or communications from a server. In addition, certain data may be treated in one or more ways before it is stored or used, so that personally identifiable information is removed.

For example, a user's identity may be treated so that no personally identifiable information can be determined for the user, or a user's geographic location may be generalized where location information is obtained (such as to a city, ZIP code, or state level), so that a particular location of a user cannot be determined. Thus, the user may have control over what information is collected about the user, how that information is used, and what information is provided to the user.

CONCLUSION

Many audio and video playback applications include functionality to skip over parts of the content being played. However, such controls skip predetermined duration of content and can inadvertently lead users to skip over content portions of interest. This disclosure describes techniques that automatically determine locations and lengths of uninteresting or non-information segments in content based on user interests and context, obtained with permission. Users are provided with a suitable user interface (UI) mechanism to skip over to the next moment of interest within the content. If the user permits, data on the portions that were skipped can be aggregated and made available to content creators to help them understand user engagement with their content.