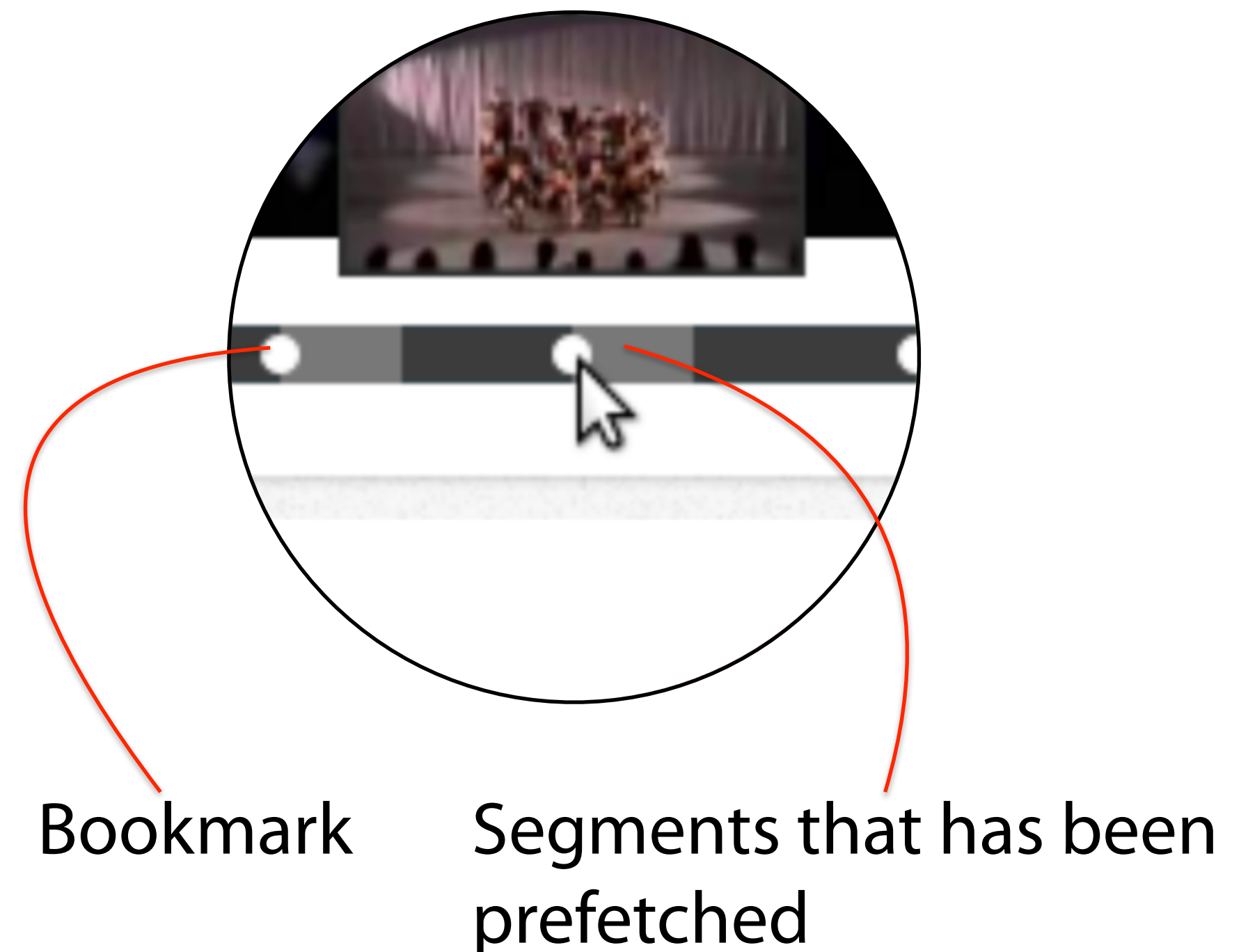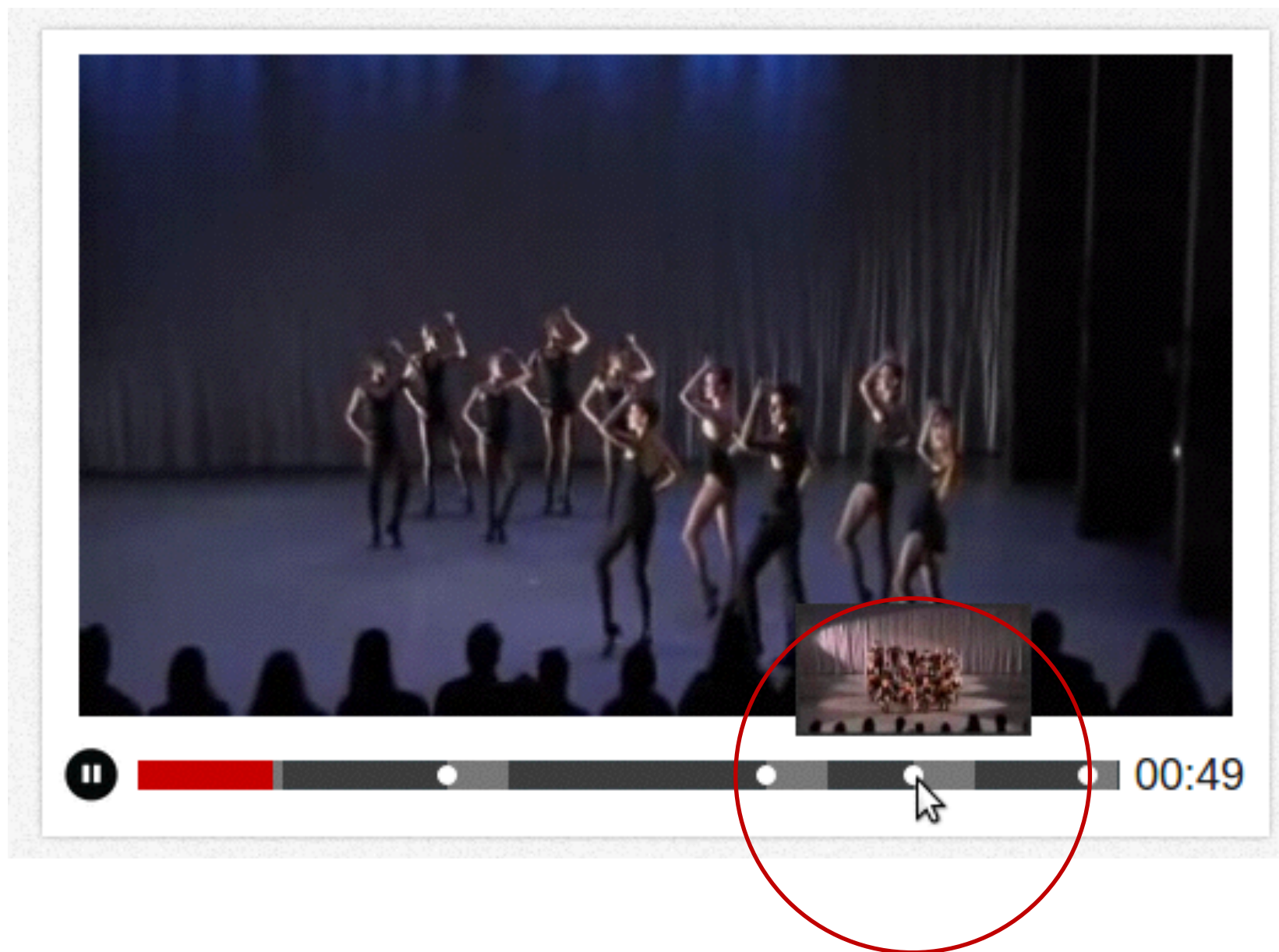# A Video Timeline with Bookmarks and Prefetch State for Faster Video Browsing

or How We Reduce Seek Latency by Nudging the Viewer to Seek to What Has Been Prefetched

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Bookmark   Segments that has been prefetched

Motivation & Approach

Video Browsing is a new video viewing behaviour where viewers seek frequently to skim through the content of video.

When browsing online videos, seeking to a playback point where the content has not been buffered incur a *seek latency*.

Much research was done in *predicting* where the viewers would seek to, and prefetch the corresponding segment to reduce the seek latency.

We *bias the user to seek to the segments that have been prefetched* instead, by exposing the prefetch state on the video playback timeline. We hypothesise that, since seeking to prefetch segments leads to zero seek latency, viewers would naturally seek to these segments.

User Study & Results

We asked 21 participants to view 6 dance videos, with option to like/share the video. Three of the videos are shown with bookmarks and prefetch state. Seek latency is simulated for reproducibility.

Participants seek to bookmarks more often when shown the prefetch state, reducing the seek latency by 40%.

No participant finds that seeking to prefetch content deters their understanding of the video content.

% Seeks to Bookmark

- ■ Standard
- ■ With Prefetch State

Seek Latency (s)

- ■ Standard
- ■ With Prefetch State