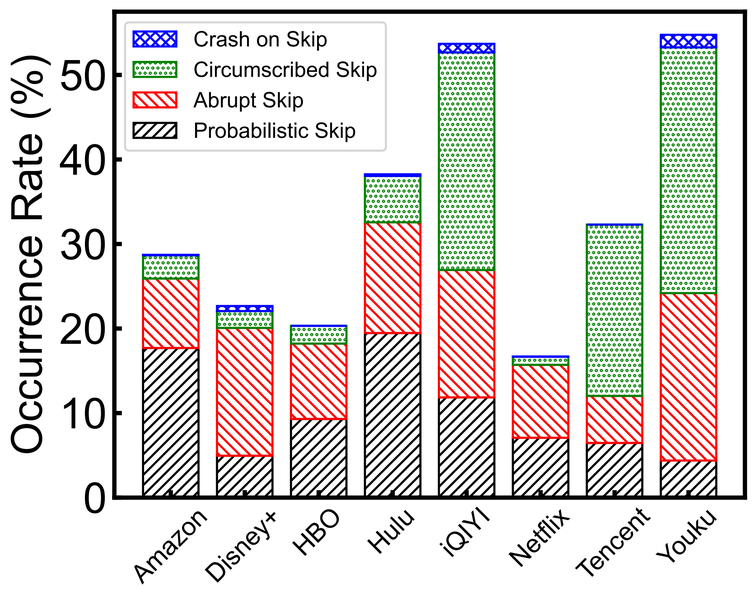
ACM MM 2023
Ottawa, Canada
October 29 – November 3, 2023

Tsinghua University

USC University of Southern California

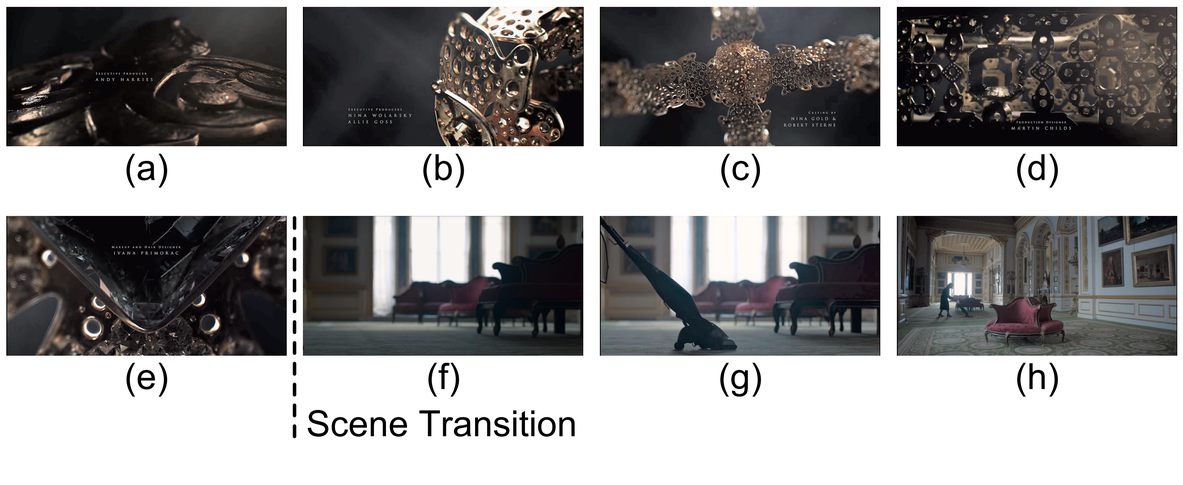
SkipStreaming: Pinpointing User-Perceived Redundancy in Correlated Web Video Streaming through the Lens of Scenes

Wei Liu, Xinlei Yang, Zhenhua Li, Feng Qian

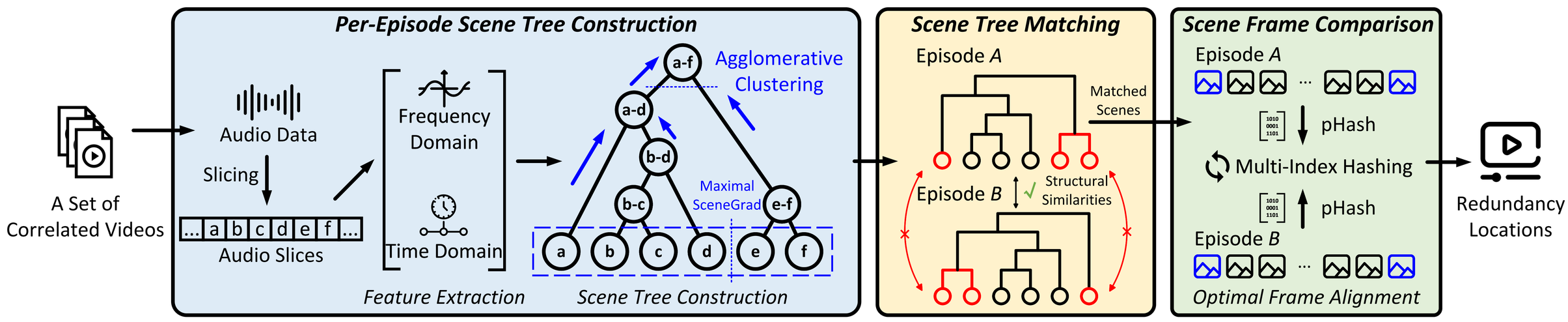


Correlated videos (e.g., a series of TV episodes) cover an average of **35%** Internet traffic

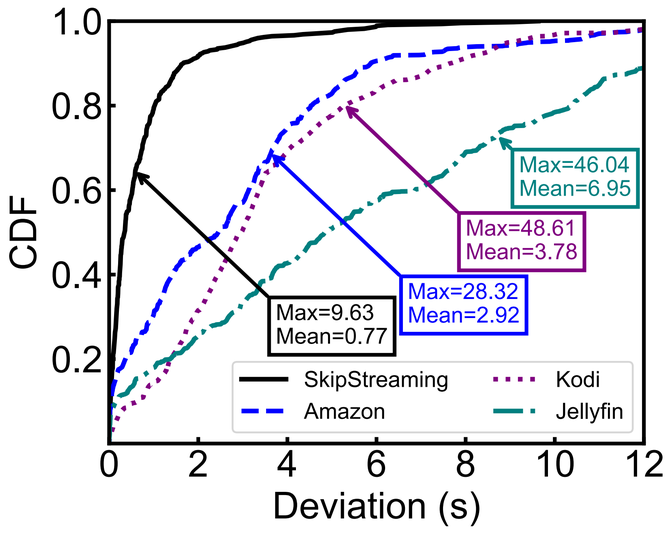
User-perceived redundant clips (e.g., intros, outros, and recaps) in correlated videos are skipped **costly** and **inaccurately**

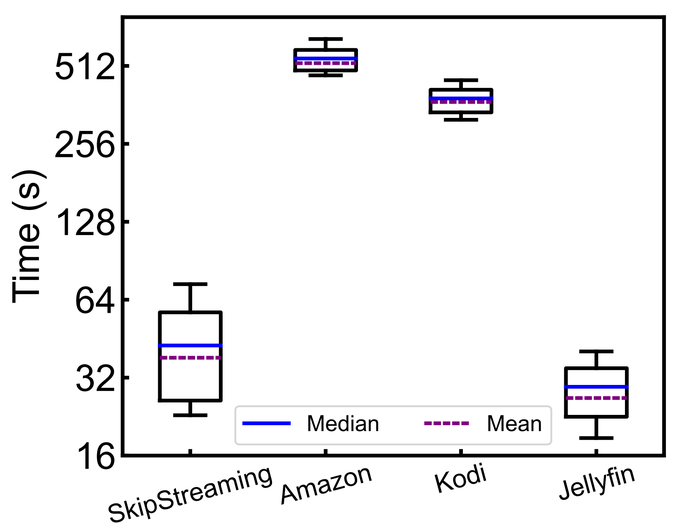


Key observation: Redundant clips are made up of one or more complete scenes



SkipStreaming: Fast and accurate visual redundancy detection based on the *Audio-guided Scene Sketch* methodology





- **~38 seconds** to identify user-perceived redundant clips for a 45-minute video
- Incurring only **2% false positives** and **7% false negatives**, which will not affect user experiences

Code and data are publicly available at https://skipstreaming.github.io/

Contact us at liuwei199803@gmail.com for more details