

Project Disco: A Video Alternative for Online Learning

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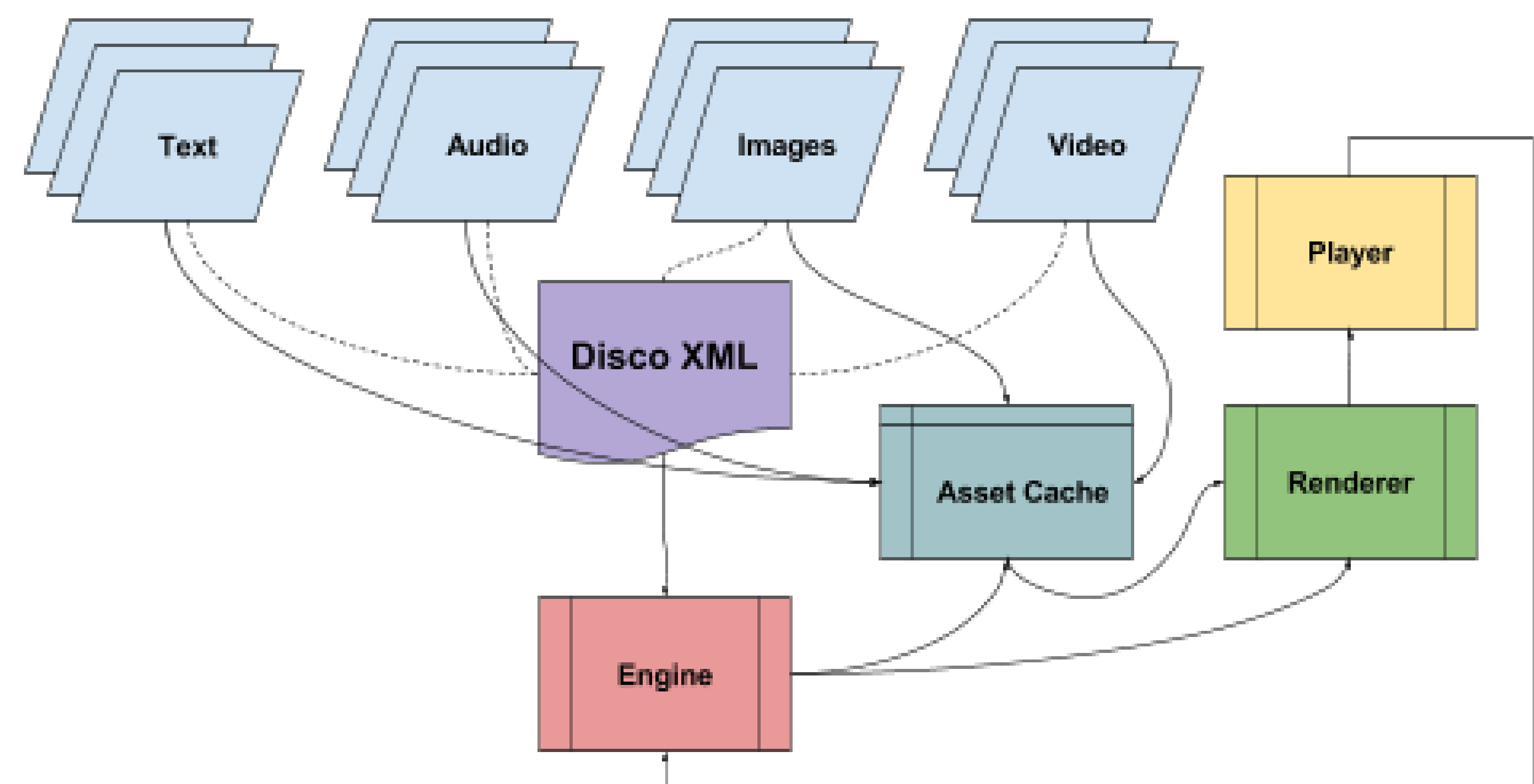
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Problems with Traditional Video in Online Learning

- **Maintenance** of videos is difficult and costly. Online video lectures have to be re-recorded and re-uploaded just for one change, and there's no easy way to fix outdated content or typos.
- **Closed source** nature of traditional video formats prevents collaborative content production. Online teachers and students cannot easily contribute edits and corrections.
- **Bandwidth** required to download videos is very large. Much of online educational content is text, audio, and image based. Recording these assets as a video tremendously increases their file size.

Our Solution

- We developed a **new video format and player** that allows content producers to create a video while still maintaining its individual media components as separate entities.
- The format reads in different assets (image, audio, video, text) and the timing information for when each asset should be played. This information is then stitched together on a web browser in real-time to create a seamless final video.

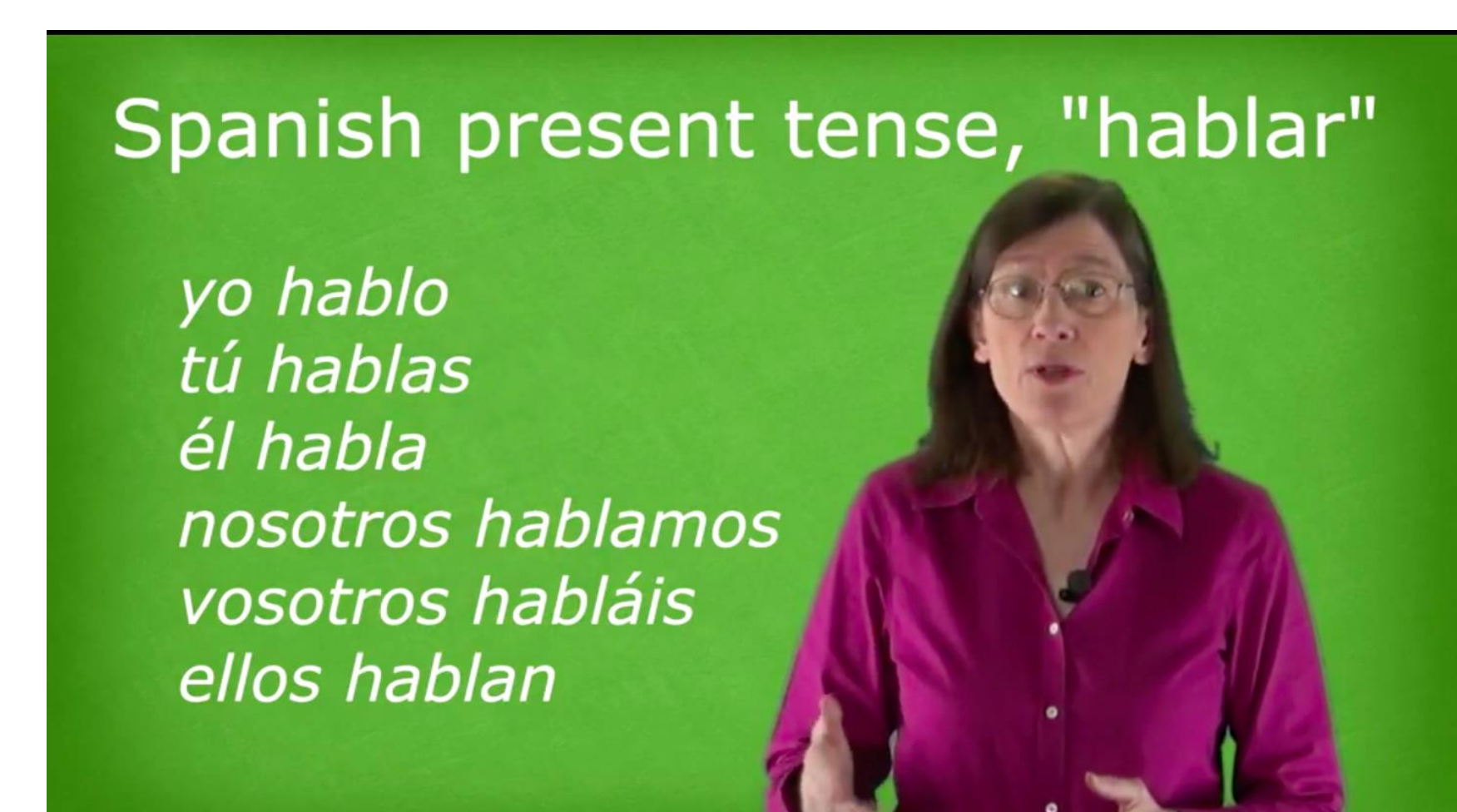
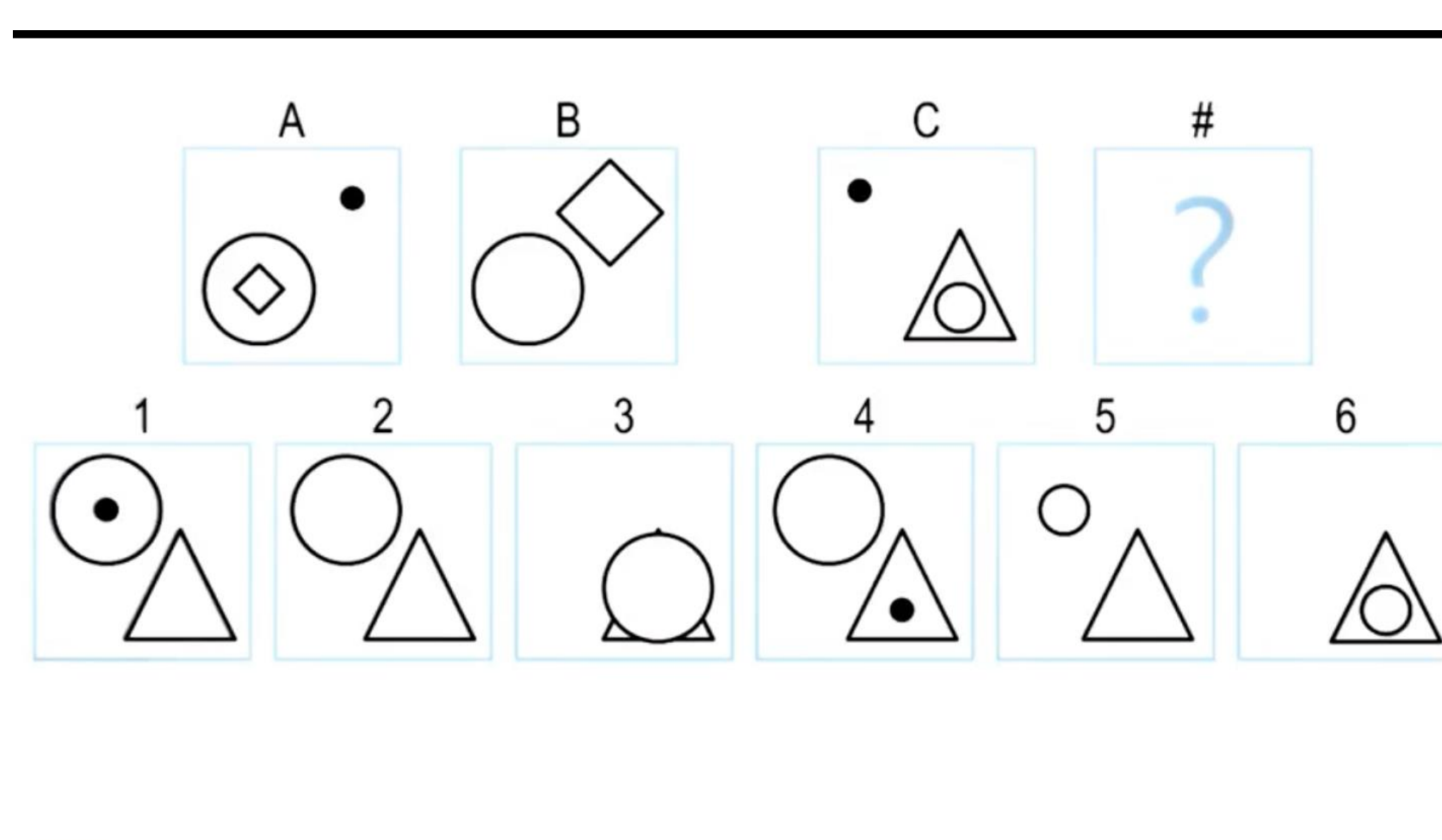


Video format and player architecture

Benefits for Online Learning

- **More maintainable.** Content producers can edit desired sections of a video while leaving the rest intact. Online lectures have an abundance of small, easily grouped pieces of information and need to continuously update that information.
- **Easy open-sourced collaboration.** Content editors can update different sections of a video simultaneously without interfering with one another.
- **Lower file-sizes** for online lectures that have separable media components (e.g. online lectures that are text and image heavy). We achieved a **300% reduction in file size** by converting a slide-based video lecture from an online Georgia Tech class.

Slide-based video lectures (left) and talking heads with text-overlay (right) are good candidates for our format:



Demo: bit.ly/ProjectDisco