

READ ME

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- Content
 - Do not include any company confidential information in your presentation since all presentations will be posted on the web site.
 - Submit your presentation to your client for approval at least two days in advance.
 - Throughout the PowerPoint template, replace placeholders [...] with the appropriate information.
 - Edit the center footer by clicking the Header & Footer button on the Insert ribbon. Change [Team Name] in the footer to your company name as in “Team TechSmith Project Plan Presentation”. If necessary, extend the width of the center footer textbox on the master slide, making sure that you re-center the enlarged textbox.
 - Delete the example Screen Mockups and System Architecture slides and all Read Me slides from your presentation.
 - The screen mockups should contain little or no bordering transparent or whitespace. Use paint.net to crop them appropriately.
 - If a slide contains more than one screen shot or additional artwork (like an arrow), group all of the items into a single grouping so that it can be copied-and-pasted and resized as a single unit
- Required Template
 - Do not edit the Slide Masters.
 - Do not change the organization of slides.
- Presentations
 - Although the presentations are scheduled over the course of four meetings, all teams must be prepared to present on the first day scheduled, Monday, September 24.
 - The order of the presentations will be posted on our [All-Hands Meetings](#) page in the evening of the day before the first day scheduled for presentations.
- Submission ← **Read this carefully.**
 - Email your Word Document and PowerPoint slide-deck to [Dr. D.](#) and to your client by 12:01 a.m. on Monday, September 24. (Think Sunday night.) Send your presentation to your client in a separate email; do not cc me.
 - For subject, use “Team [Team Name]: Project Plan Presentation” as in “Team Amazon: Project Plan Presentation”.
 - Attach the Windows PowerPoint source file named “team-[team-name]-project plan-presentation.pptx” replacing “[team-name]” with your team name (using all lower case and replacing all blanks with dashes) in your filename as in “team-urban-science-project plan-presentation.pptx”.
 - Attach the Windows Word source file named “team-[team-name]-project plan-document.docx” replacing “[team-name]” with your team name (using all lower case and replacing all blanks with dashes) in your filename as in “team-urban-science-project plan-document.docx”.
 - Include some text in the body to practice being a professional and to avoid having your email sent to my junk folder.



MICHIGAN STATE

UNIVERSITY

Project Plan

Making Firefox's Picture-in-Picture Even More
Awesome

The Capstone Experience

Team Mozilla

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Fall 2020



*From Students...
...to Professionals*

Functional Specifications

- Create new features for Picture-in-Picture so it is a better experience for the user
- Fix issues with current features in Picture-in-Picture that may be outdated or broken
- Implement commonly requested features from users and user data
- Make Firefox's Picture-in-Picture better than the competitors (Google, Safari, Edge)

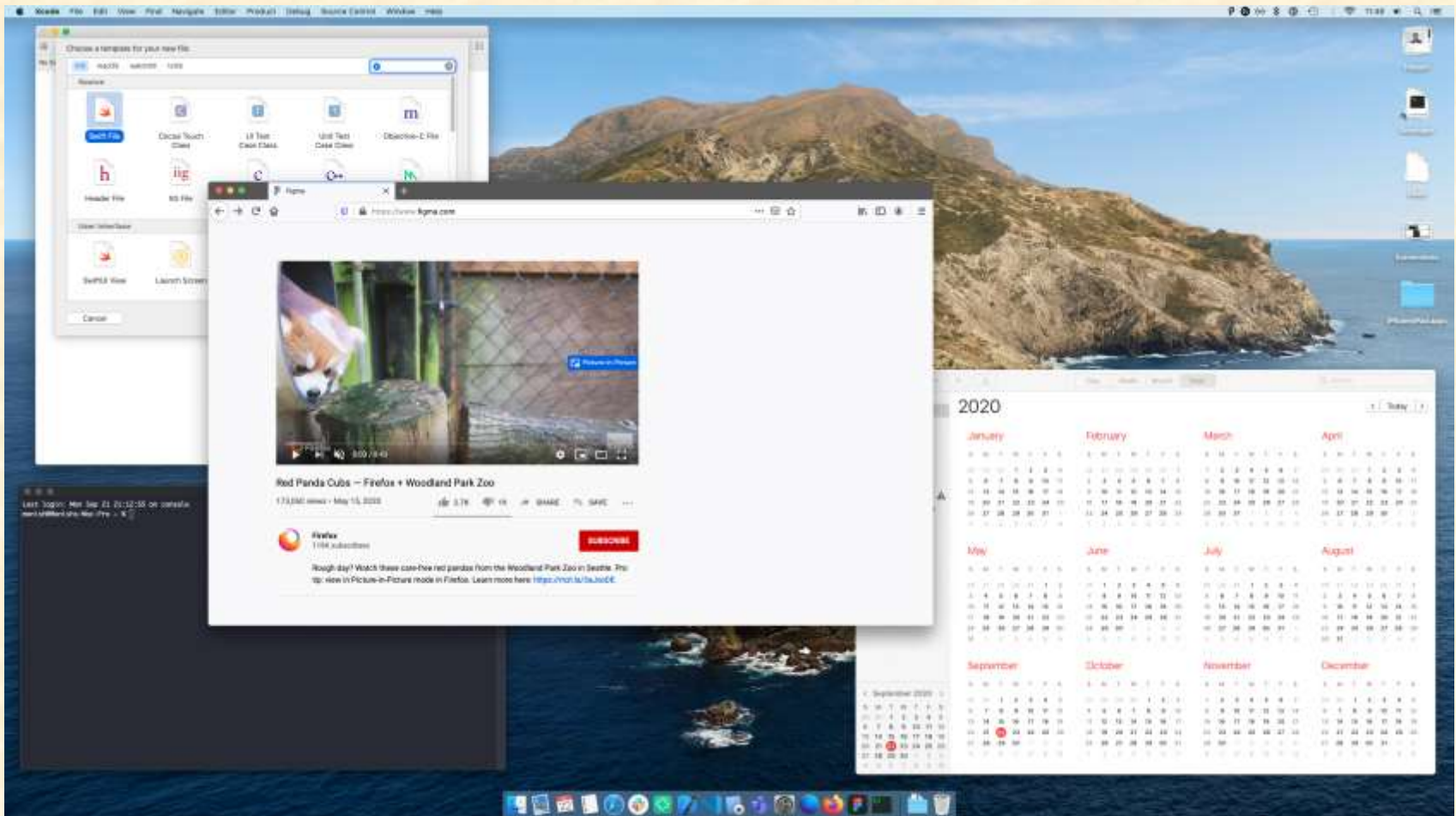


Design Specifications

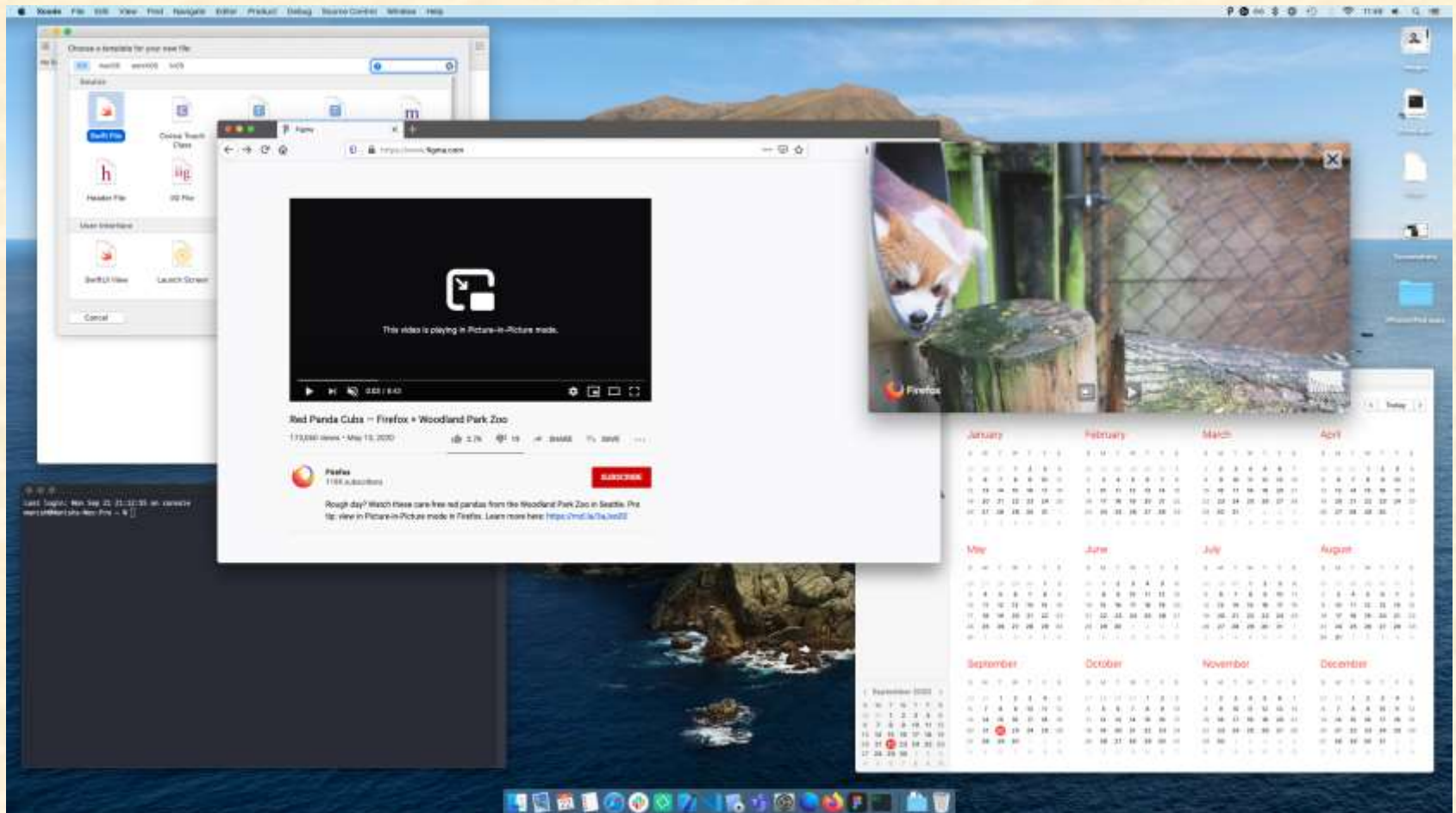
- Multiple Picture-in-Picture windows
- Snap the Picture-in-Picture window to the corner of the screen
- Save the last Picture-in-Picture location and size and open the next Picture-in-Picture window there
- Plus many more features that will make Picture-in-Picture even more awesome



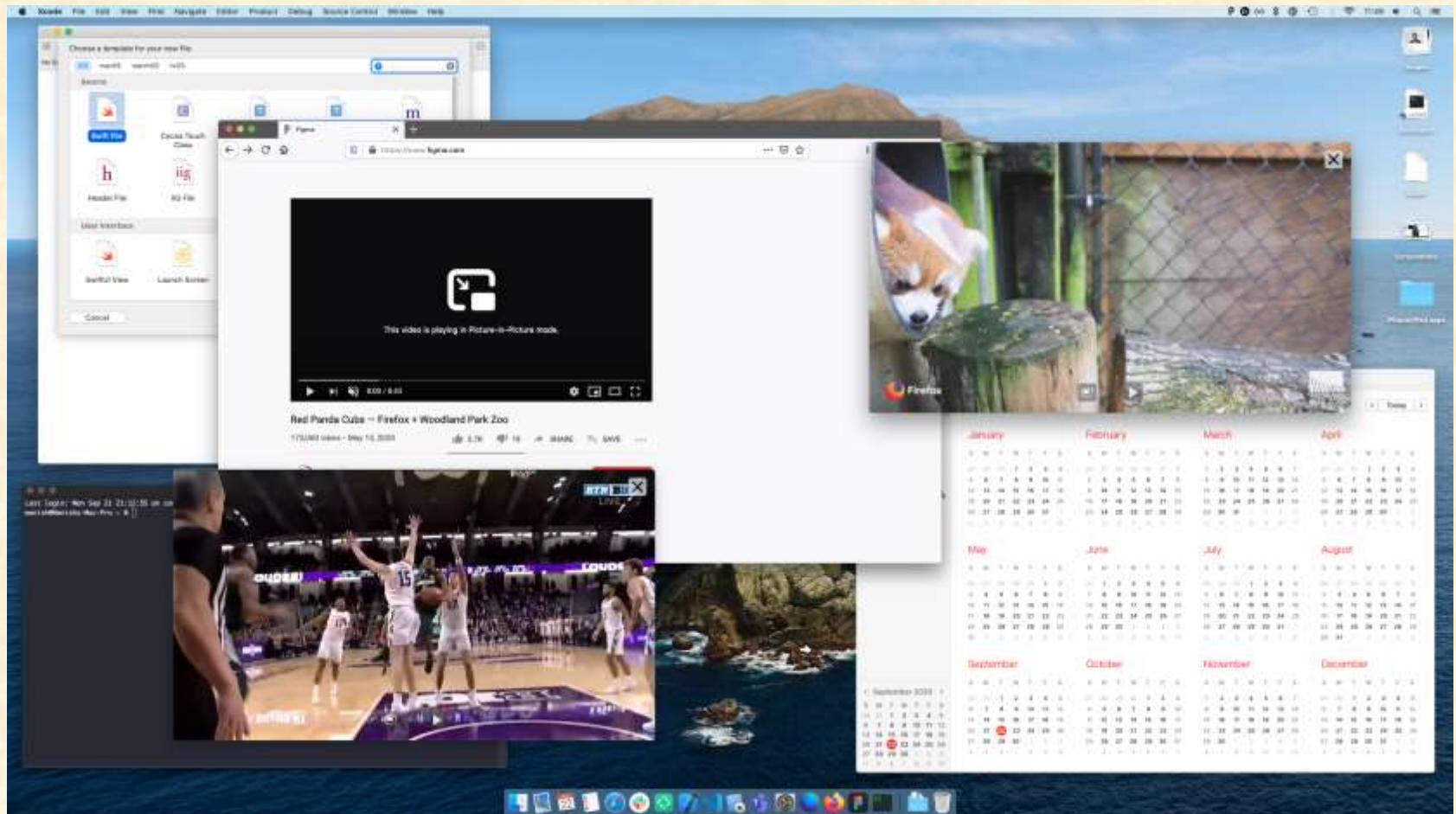
Screen Mockup: PIP Toggle



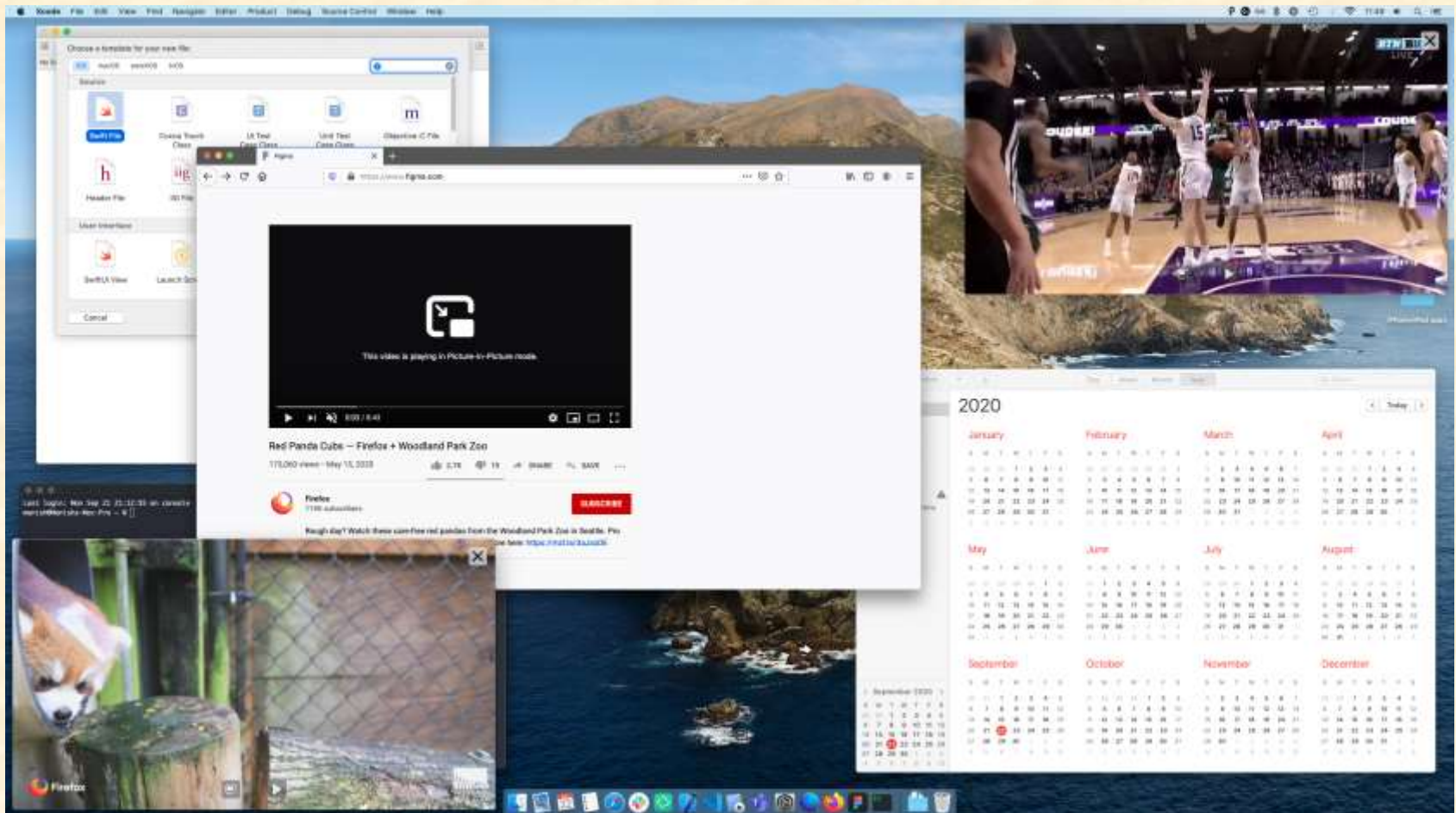
Screen Mockup: Single PIP



Screen Mockup: Multiple PIP



Screen Mockup: PIP Corner Snapping

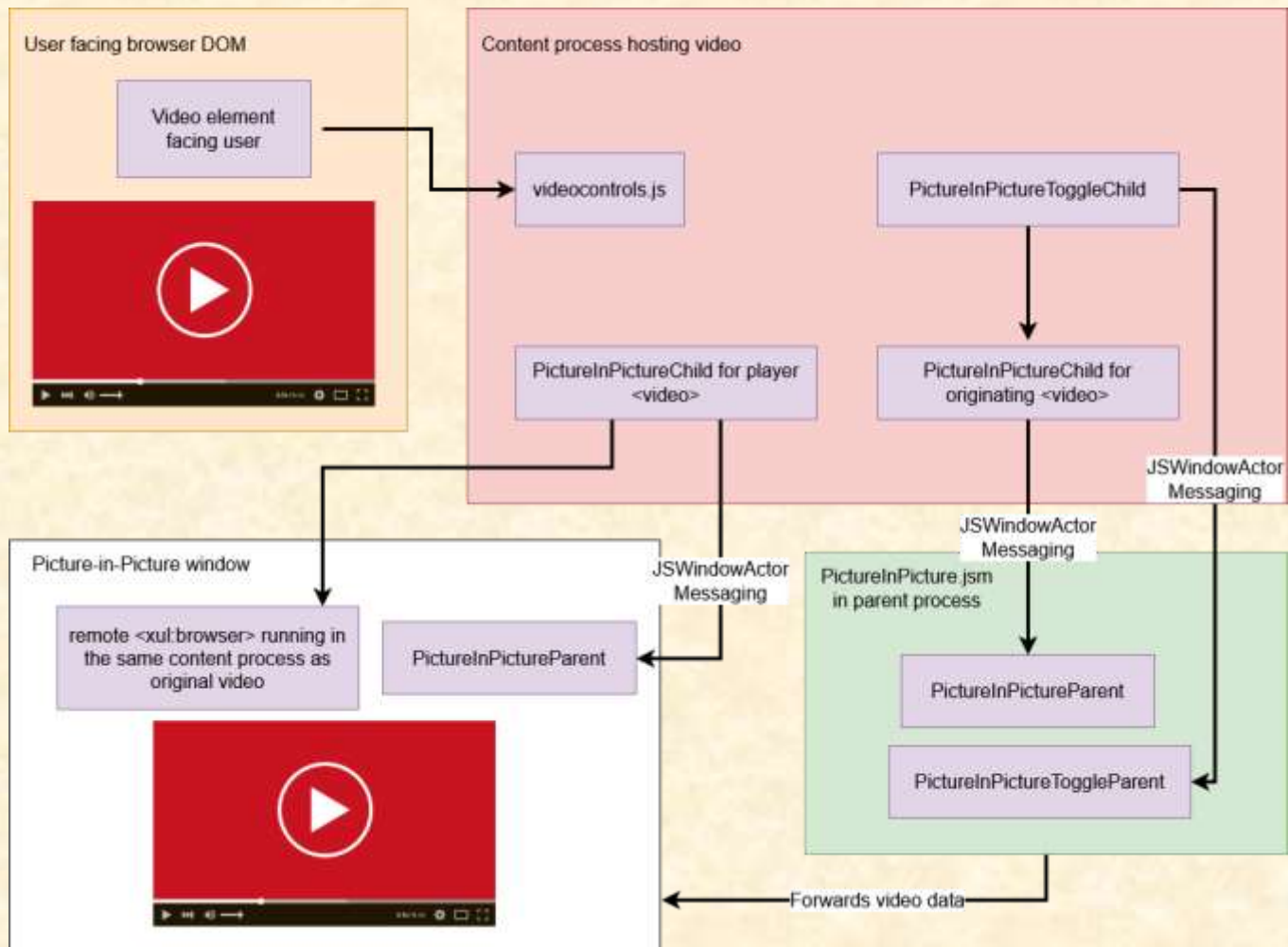


Technical Specifications

- JavaScript, CSS, HTML, & C++
- Local build environment
- MacOS, Windows, Linux
- Bugzilla (Issue tracker)
- Mercurial (Distributed version control)
- Phabricator (Code collaboration/review tools)



System Architecture



System Components

- Hardware Platforms
 - None
- Software Platforms / Technologies
 - JSActors library
 - New and improved Electrolysis codebase
 - Internal Mozilla development servers (integration pipelines, automated tests)



Risks

- Web Compatibility
 - Firefox's Picture-in-Picture relies on the usage of common web elements. As a result, some websites that don't use these common elements may be unsupported. Additionally, some websites intentionally obscure these video elements, making detection more difficult.
 - We believe this can be mitigated by discussing common compatibilities issues with our project sponsors as well as testing a wide variety of websites to locate/develop for common compatibility issues.
- Merge Conflicts
 - Firefox is a large, open-source project and so the team may encounter other developers working on similar sections of code as our team which may cause issues with conflicting code.
 - In order to mitigate this, the team will monitor Bugzilla for any bugs related to Picture-in-Picture. Additionally, we will also consult our project sponsors regarding any changes made to the code base that may cause conflicts.
- Development for Multiple Environments
 - Due to Firefox's large user base, it is important that our code works appropriately for various environments such as MacOS, Windows, Linux, etc.
 - The team plans to mitigate this risk through iterative prototyping. First, we will develop for one platform and then incrementally add other platforms while avoiding regression. We also have access to several different environments that the team can use for testing to better locate potential problems.



Questions?

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