

https://drive.google.com/drive/folders/1tFF5LGyDoisKiTATabklcraux1_fS2j?q=sharedwith:public%20parent:1tFF5LGyDoisKiTATabklcraux1_fS2j

Void's Concrete Architecture

Group 30

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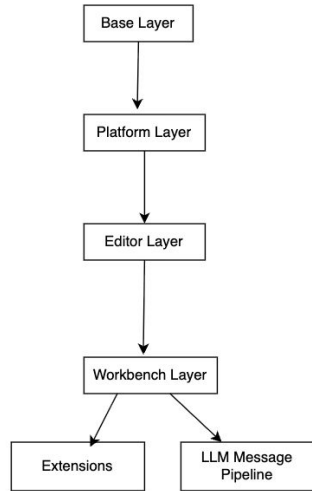
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Updated Conceptual Architecture



Legend

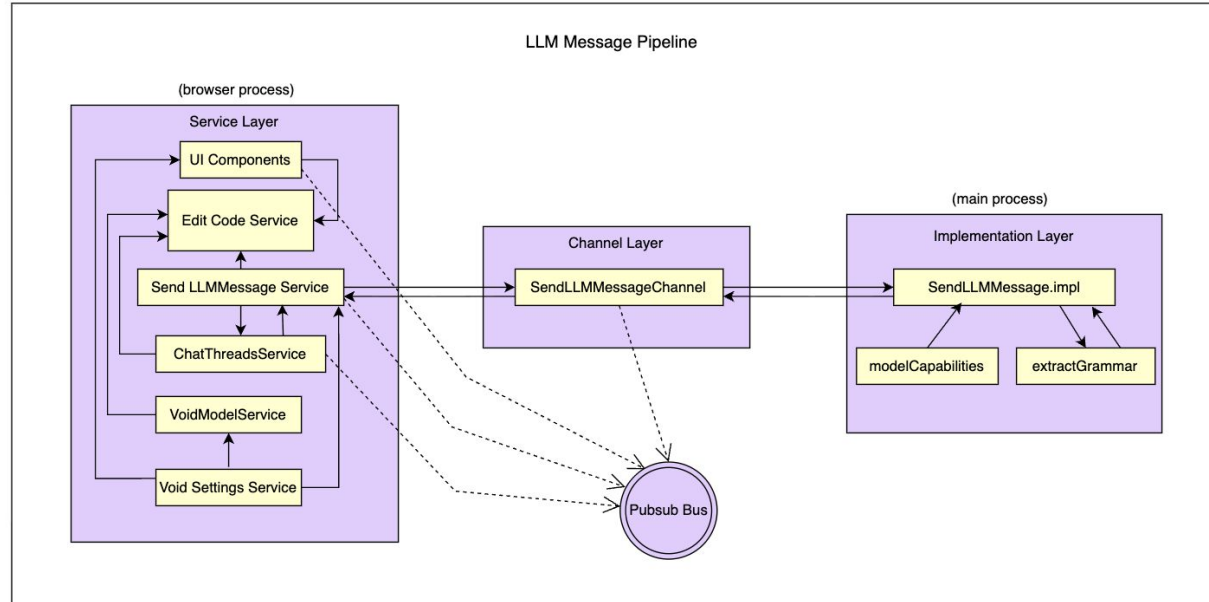
Service Layer nodes are responsible for browser processes, processing user input and code editing.

Channel Layer nodes are responsible for facilitating communication between the browser and main processes.

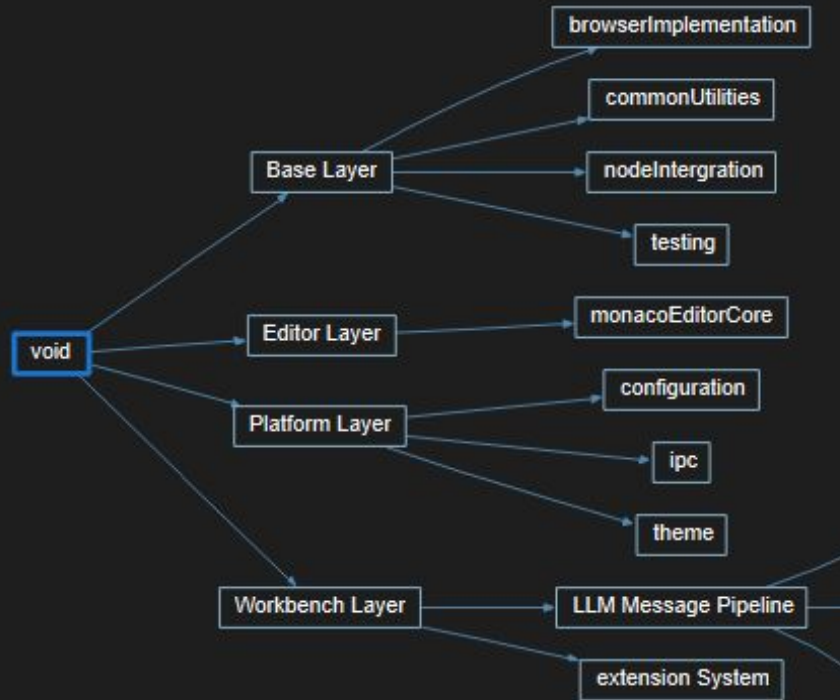
Implementation Layer nodes are responsible for communicating with external AI providers.

□ boxes represent components
→ arrows represent dependencies

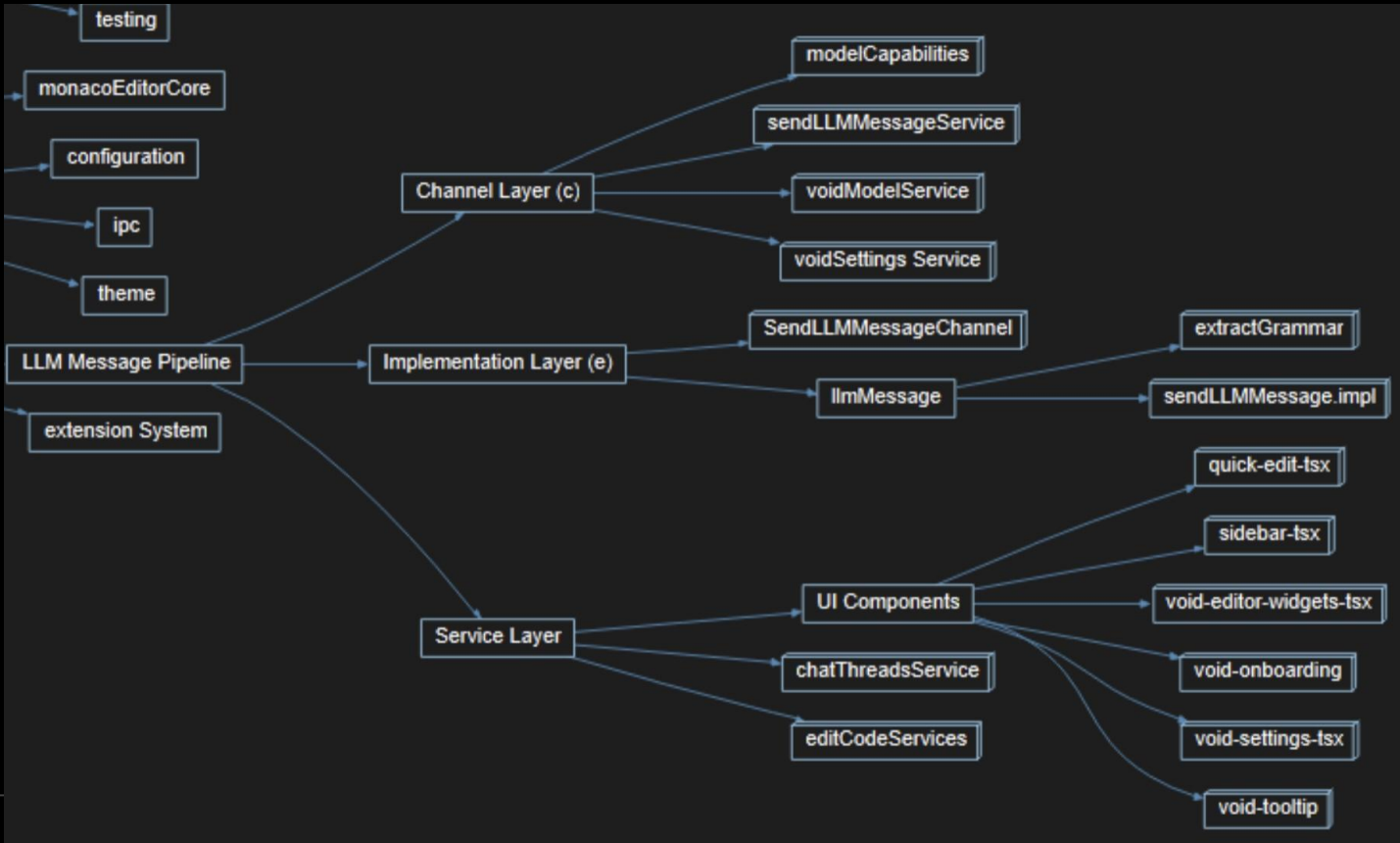
--> dashed arrows represent publish-subscribe events

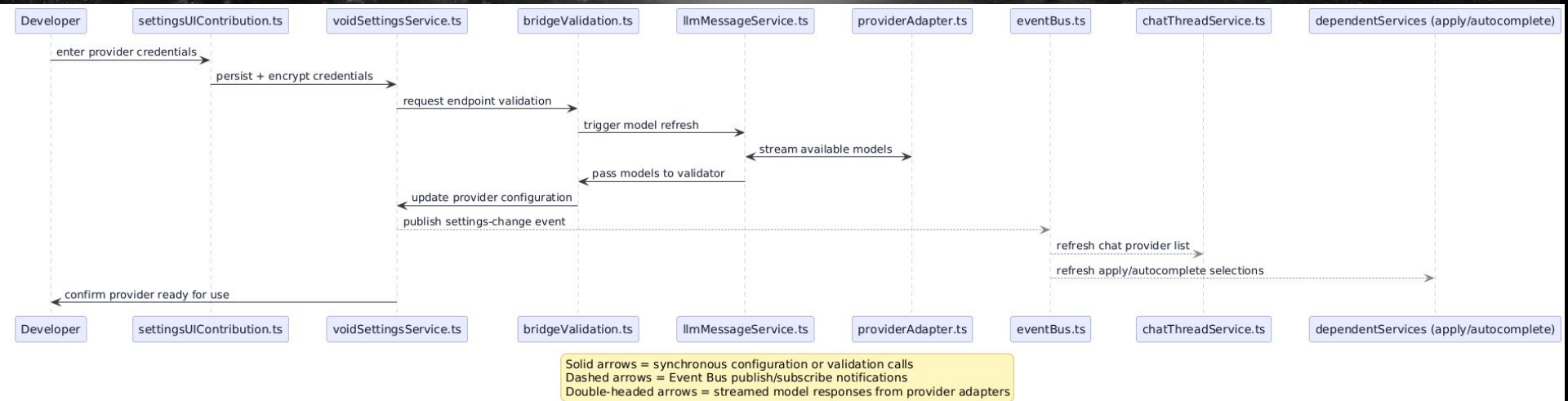
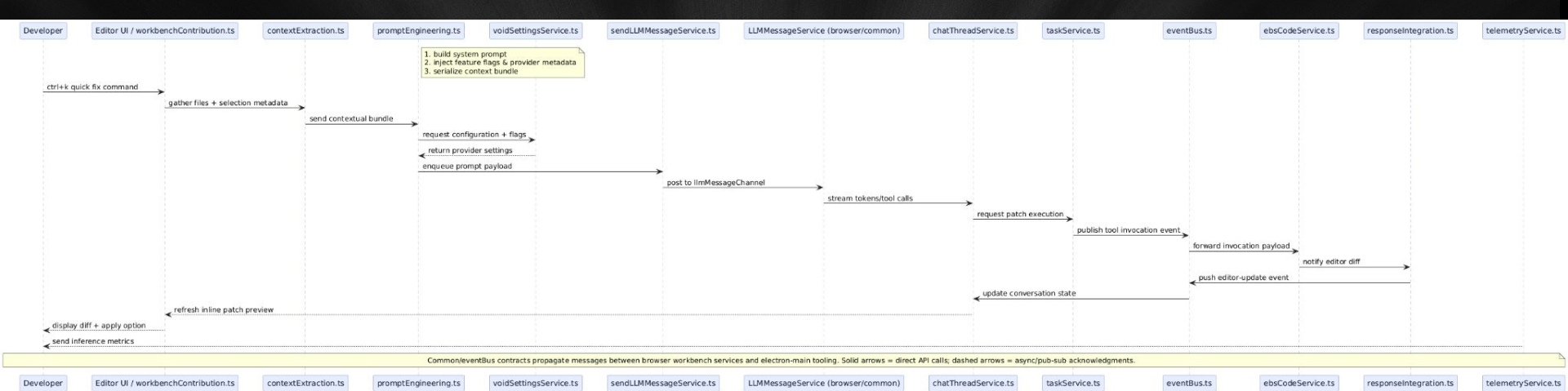


High-level concrete architecture

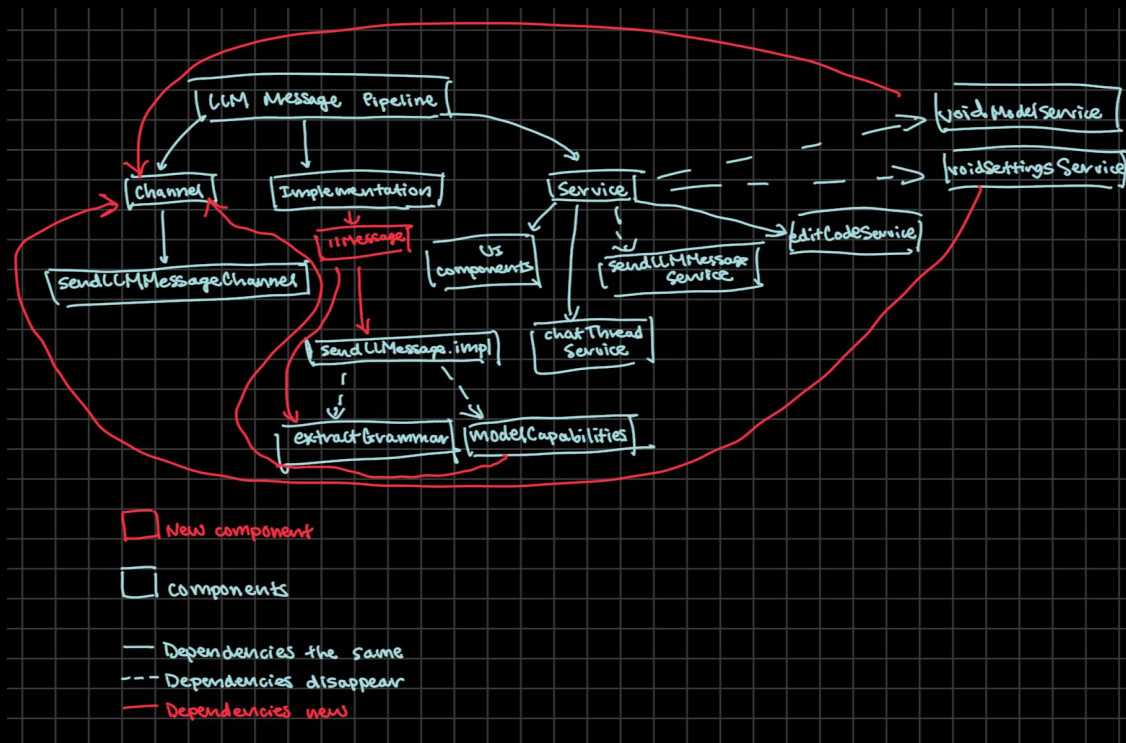


2nd level Subsystem





Divergence



Concurrency and alternatives

- Pub/Sub enables simultaneous processes
- Layered design allows a team to focus on a layer
- Client/Server Architecture:
 - reduces resources on client
 - increases latency to network communication
 - security risks when data is sent to remote servers
- Object-Oriented Architecture:
 - reusing and simplifies unit testing
 - causes tight coupling between layers



Lessons Learned and Limitations

- Learned to use Understand and how to analyze the dependencies
- Found differences between concrete and conceptual

Limitations

- Understand was incredibly laggy
- Some members could not run it and frequent crashes
- Team had to have full communication to ensure consistency
- Hard to get accurate view without being the actual developers of Void
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AI Teammate

AI Member Profile and Selection Process

- chose ChatGPT based on accessibility and ease of use

Tasks Assigned to the AI Teammate

- Proofreading and summarize code

Interaction Protocol and Prompting Strategy

- Have model open for prompt response

Validation and Quality Control Procedures

- Limited use, ensure cross reference

Reflection on Human-AI Team Dynamics

- Inconsistent, but supportive

