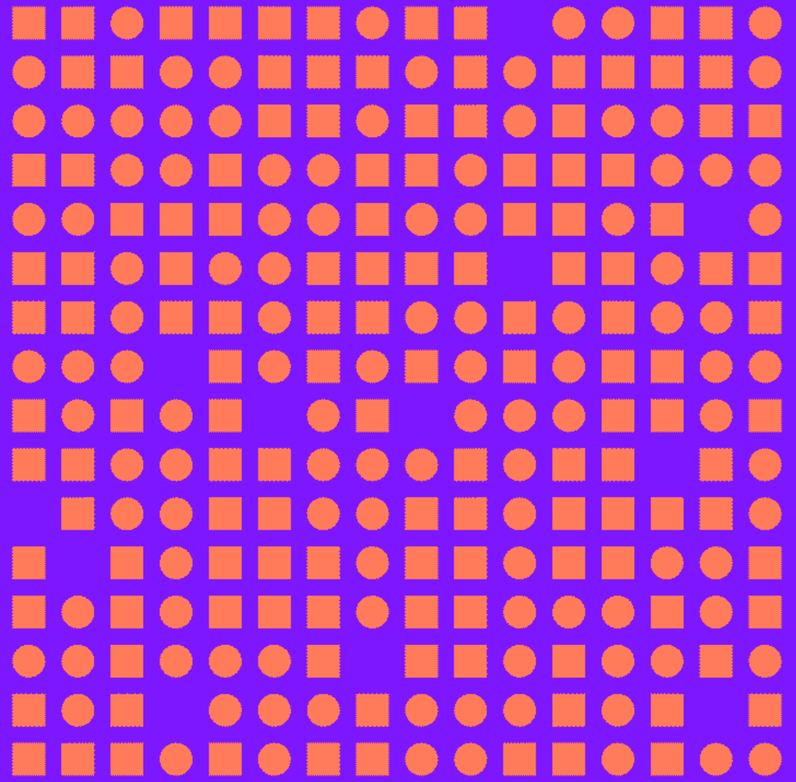
TypeFox

Introducing the Open Collaboration Tools Project

Mark Sujew – OCX 2024



Who am I?

Mark Sujew

TypeFox

HAW HAMBURG

THEIA

langium

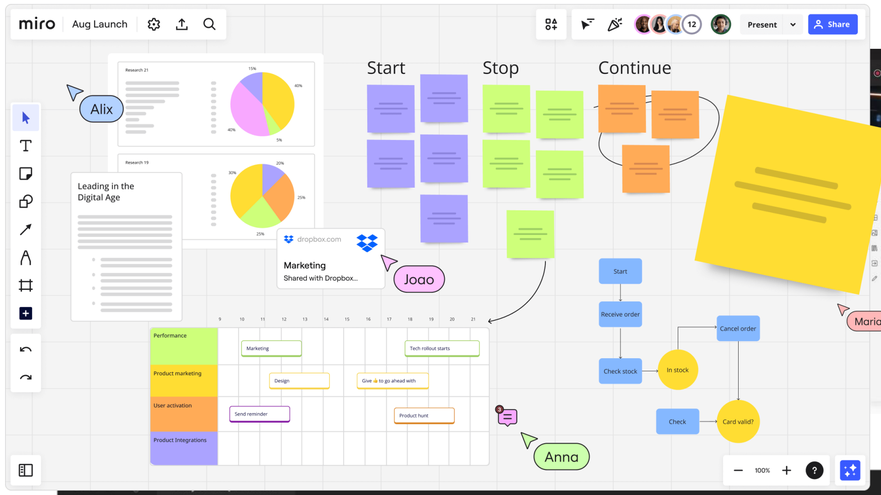


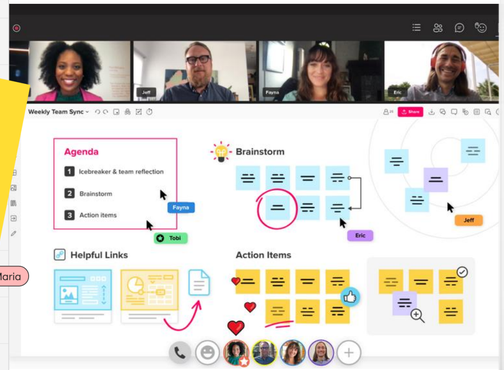
Agenda

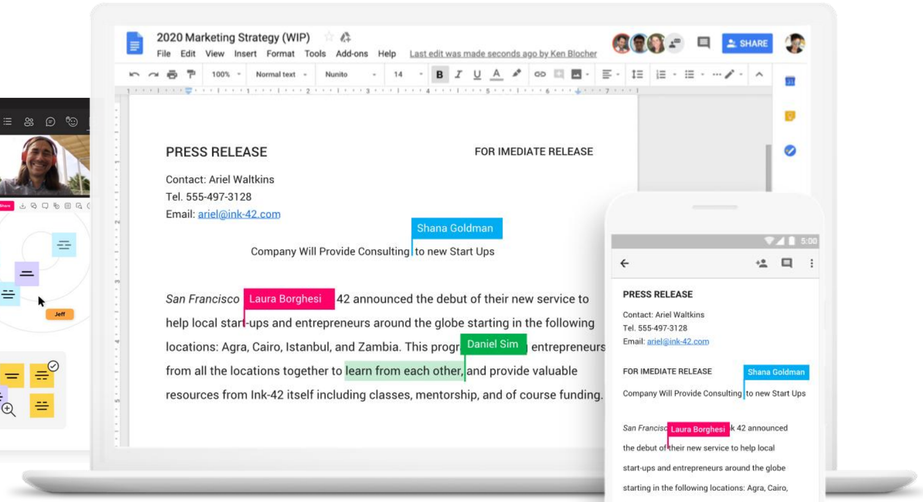
1. Engineering Collaboration
2. Existing Tooling
3. New Requirements
4. Open Collaboration Tools

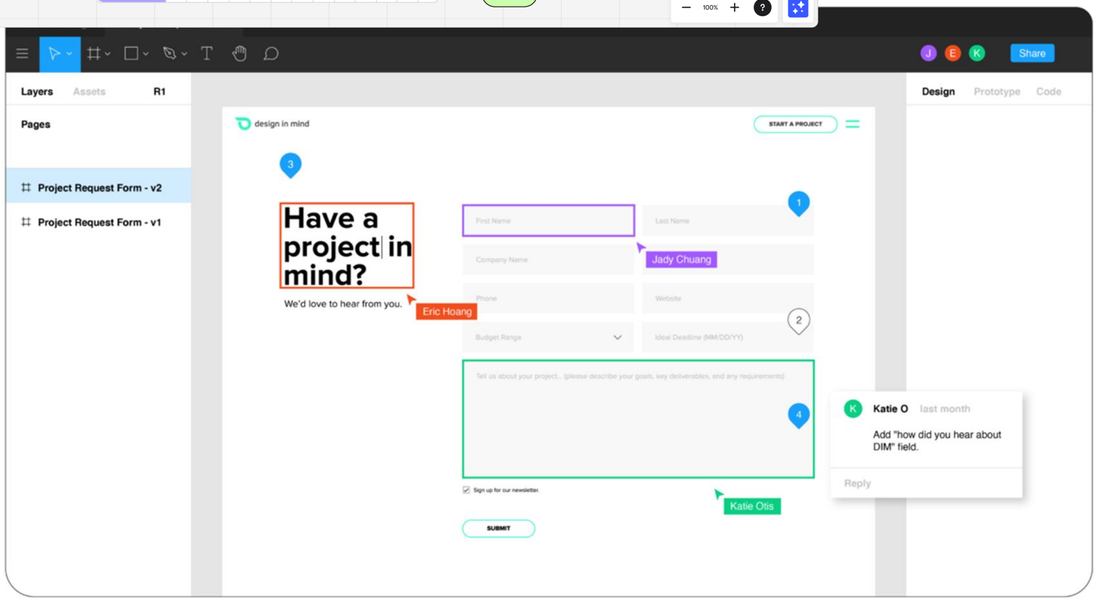


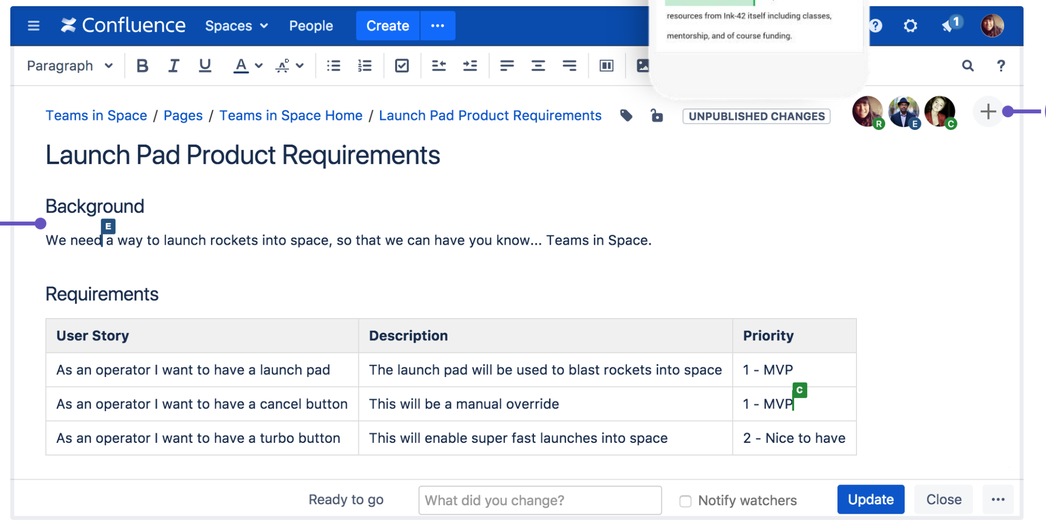
Why collaborate at all?







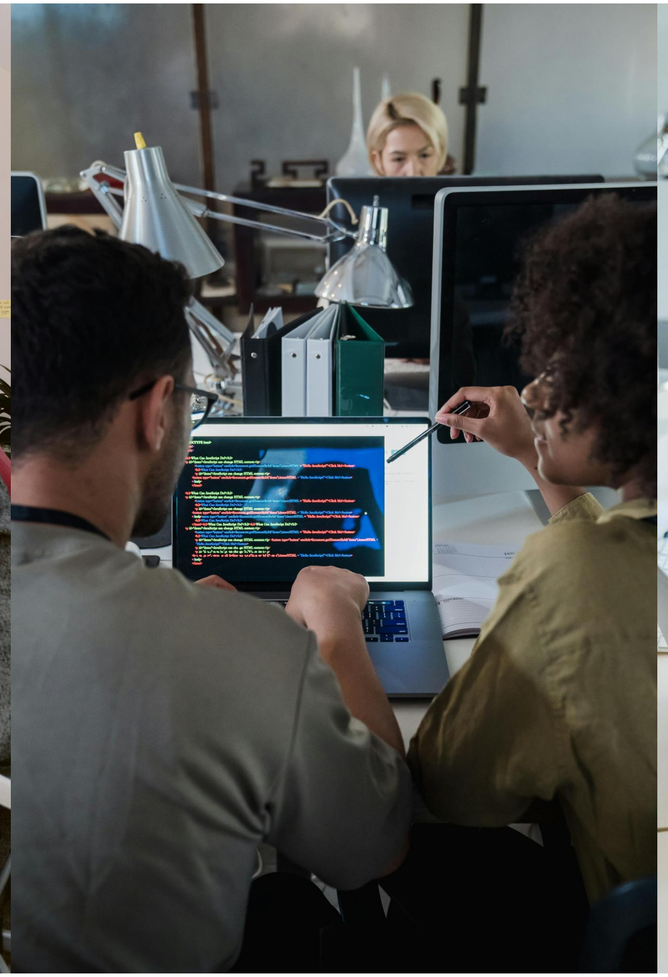




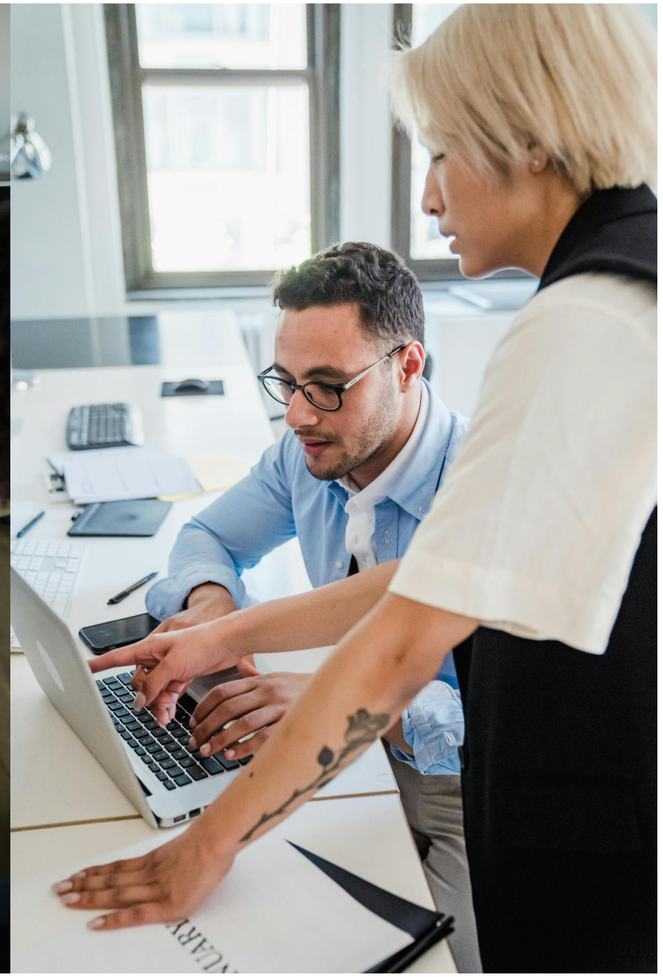
Collaboration Use Cases



Brainstorming



Programming



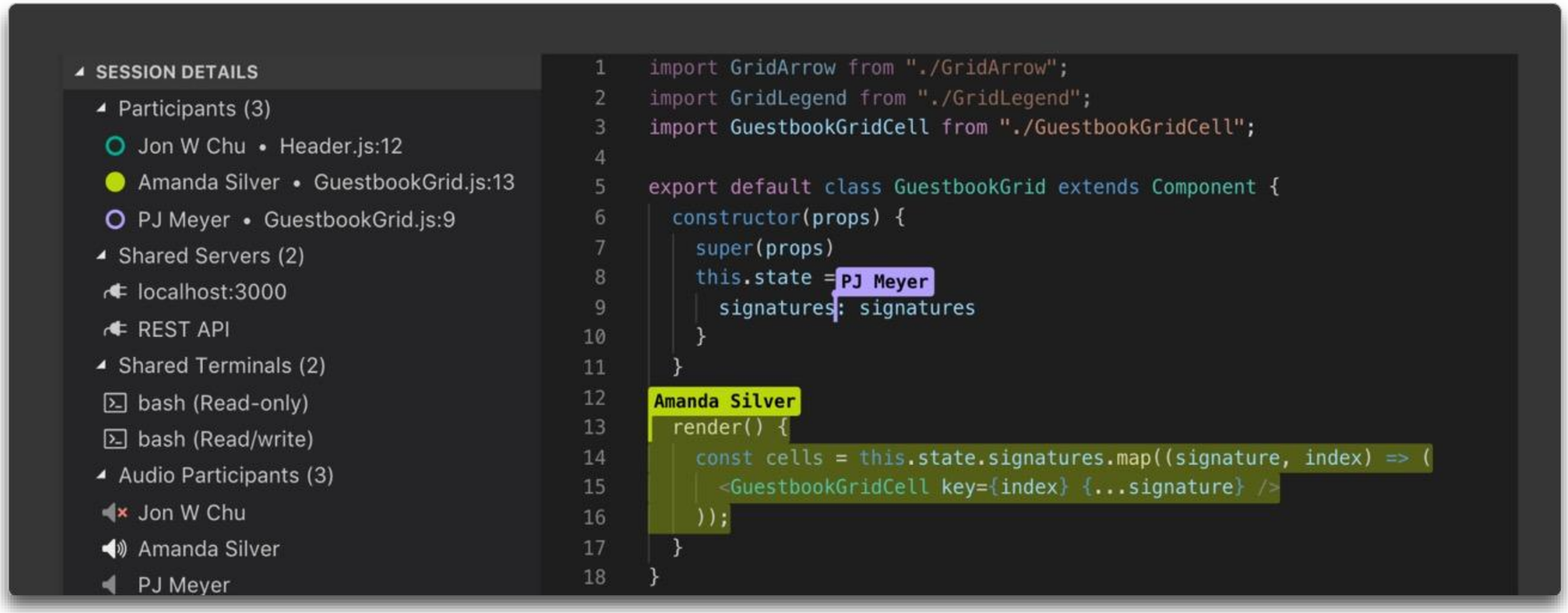
Mentoring

The Big Question

How do we manage these use cases in a remote environment?

Existing Tooling

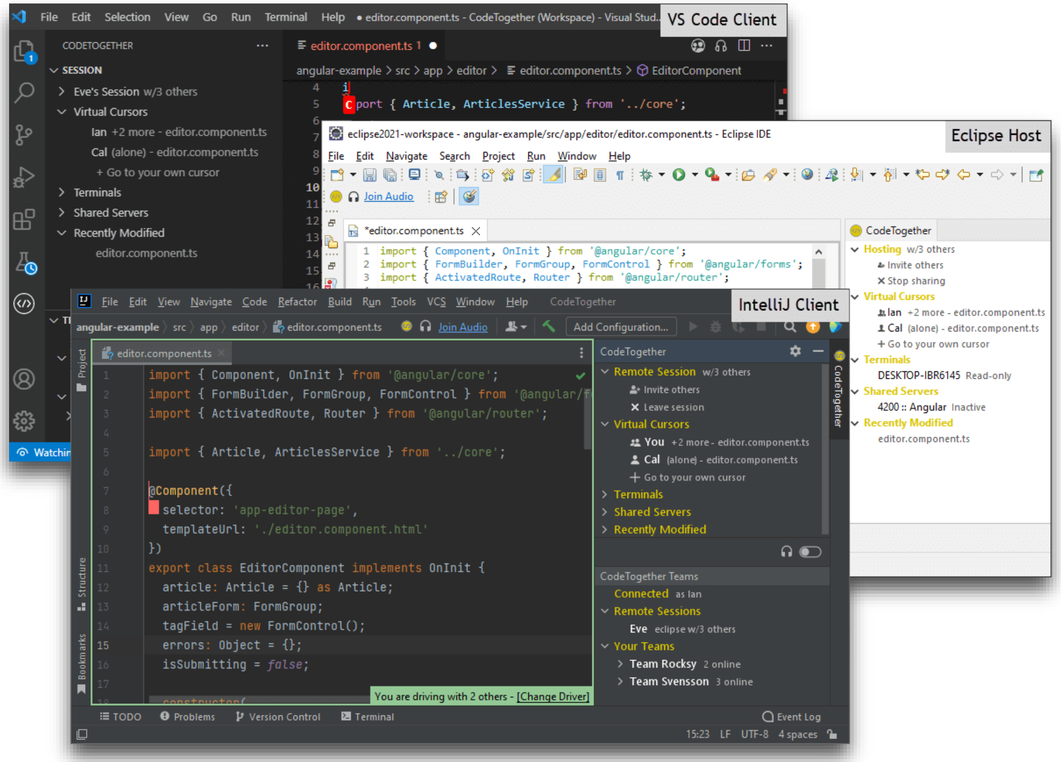
Microsoft's Take



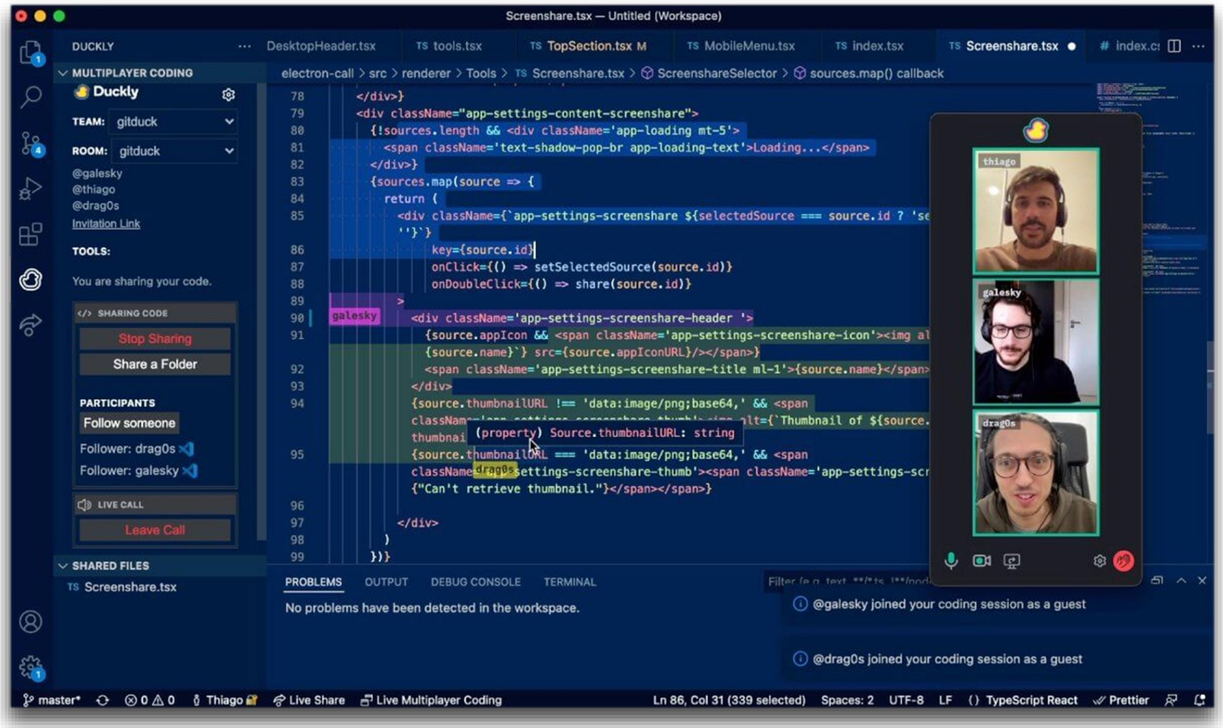
Visual Studio™ Live Share™

Existing Tooling

Startup Approaches



CodeTogether Live



Duckly

Existing Tooling

Open Source Approaches



Eclipse
Communication
Framework



EtherSync

New Tooling

TypeFox's Requirements



- Customers with Theia based products
- Customers with custom IDE-like products
- Customers needing extensible solutions for their own use cases
- On-Premise Customers

New Tooling

Developer	IDEs	Extensibility	Notable Features	On Premise	Licensing
Microsoft	Visual Studio Product Family	✓	Very good IDE integration	✗	Free, Proprietary Microsoft License
CodeTogether	VSCode, Theia, JetBrains, Eclipse IDE	✗	Large IDE Support + Web	✓	Commercial License
Duckly	VSCode, Theia, JetBrains	✗	Live audio and video transmission	✗	Commercial License
Eclipse	Eclipse IDE	✗	Uses XMPP	✓	EPL-2.0
Ethersync	NeoVim	✗	No Server / Uses Local Network	✓	AGPL-3.0
???	All the IDEs	✓	???	✓	FOSS License

Open Collaboration Tools

For all IDEs, out in the open

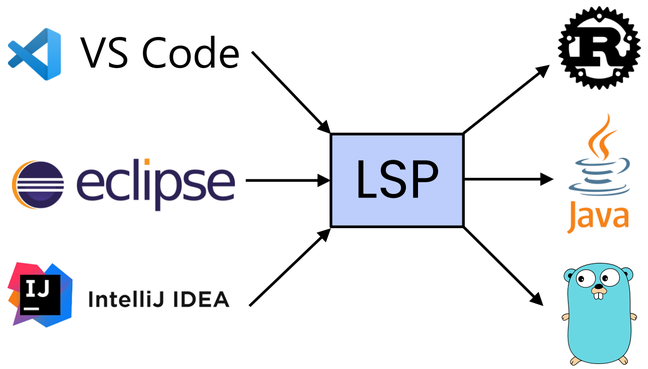
Eclipse

Open Collaboration Tools

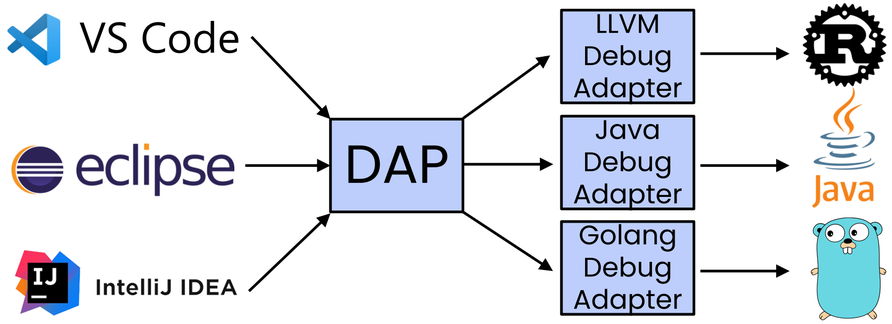
For all IDEs, out in the open

Open Collaboration Tools

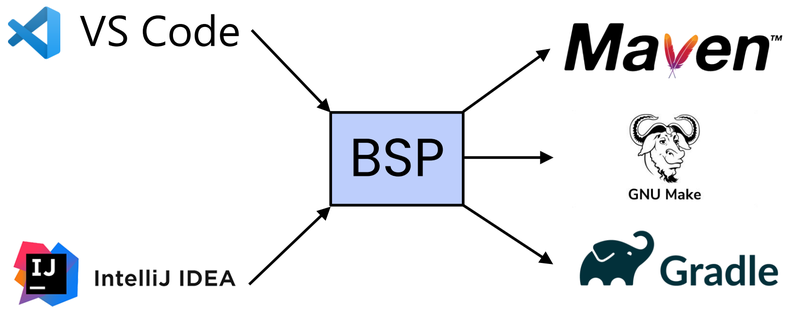
IDE Protocols Everywhere…



Language Server Protocol



Debug Adapter Protocol



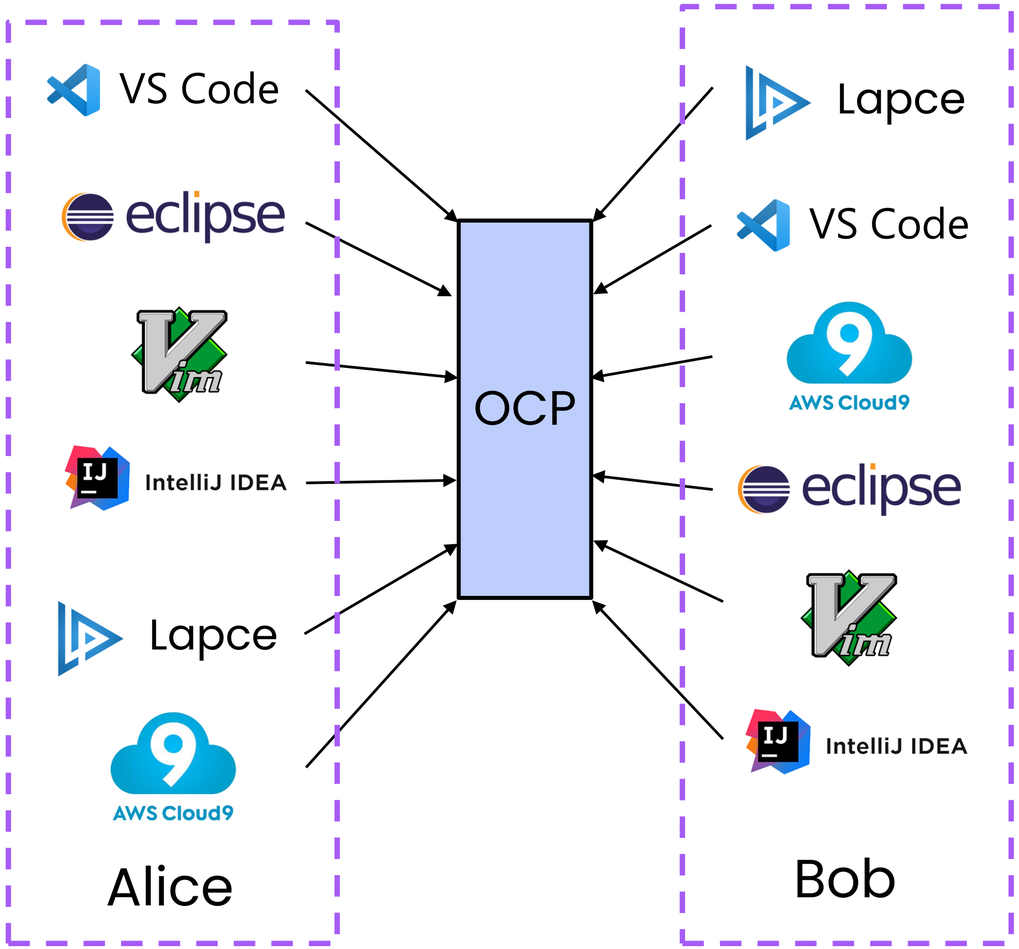
Build Server Protocol

- Made by Microsoft



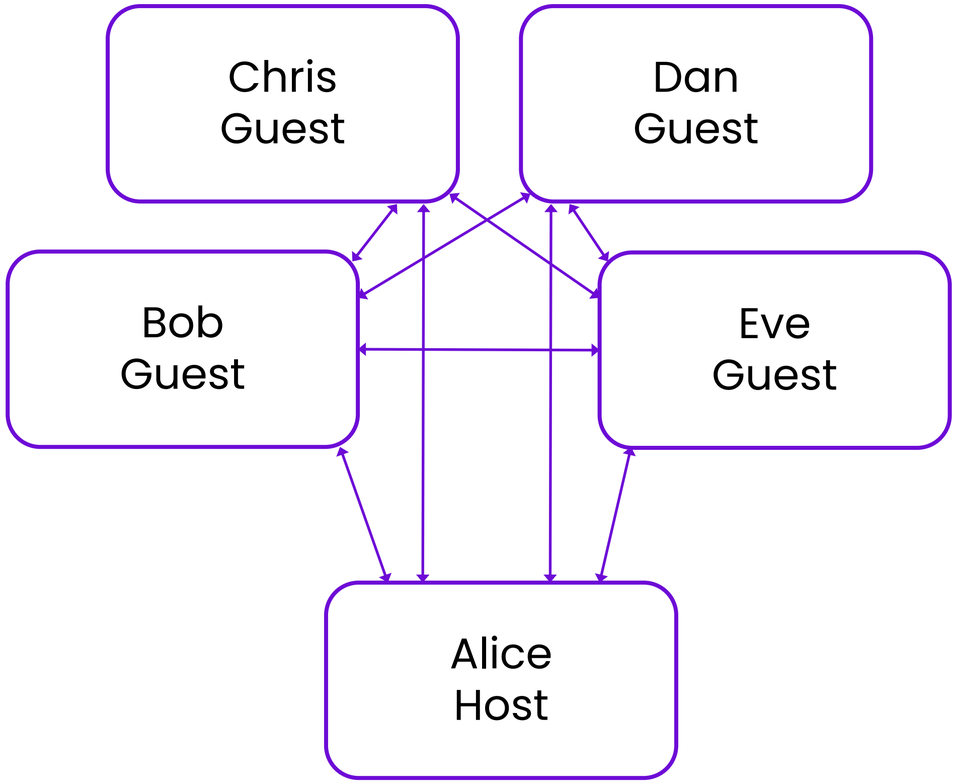
Open Collaboration Tools

… So why not for collaboration?



Open Collaboration Tools

Peer to Peer Communication

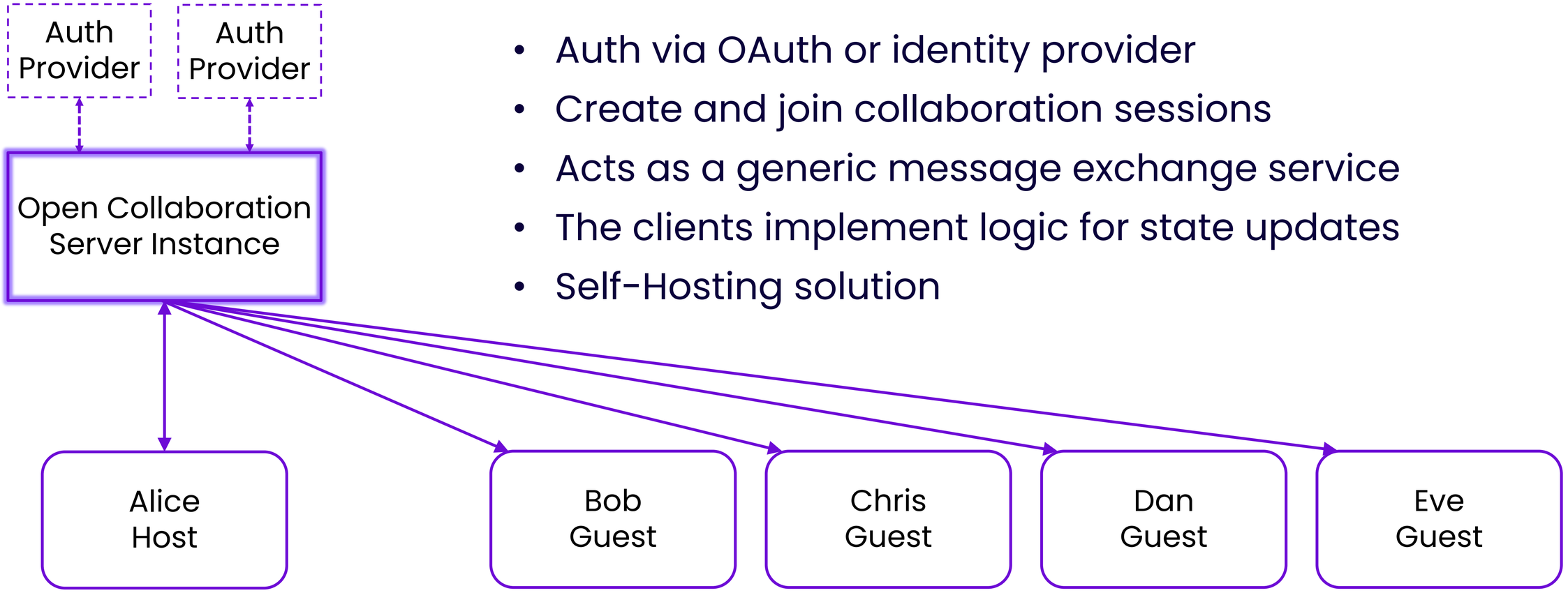


Source of Truth

- Everyone can communicate with one another
- Can be seen as P2P RPC with broadcasts
- The host acts as the source of truth for files
- Completely P2P encrypted

Open Collaboration Tools

Server Overview



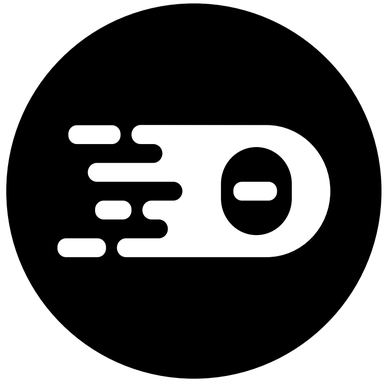
- Auth via OAuth or identity provider
- Create and join collaboration sessions
- Acts as a generic message exchange service
- The clients implement logic for state updates
- Self-Hosting solution

Open Collaboration Tools

Available IDEs



VS Code Extension



Theia Framework

Also available for:





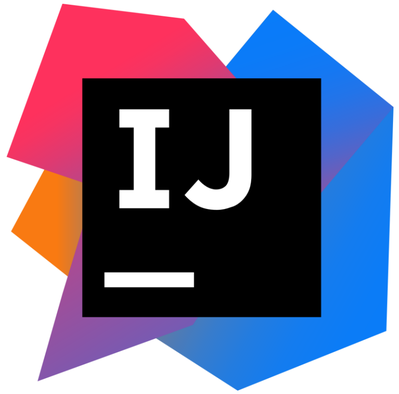
Available in all Theia based products

Open Collaboration Tools

Planned IDEs



Monaco Editor



JetBrains Plugin



Eclipse IDE Plugin

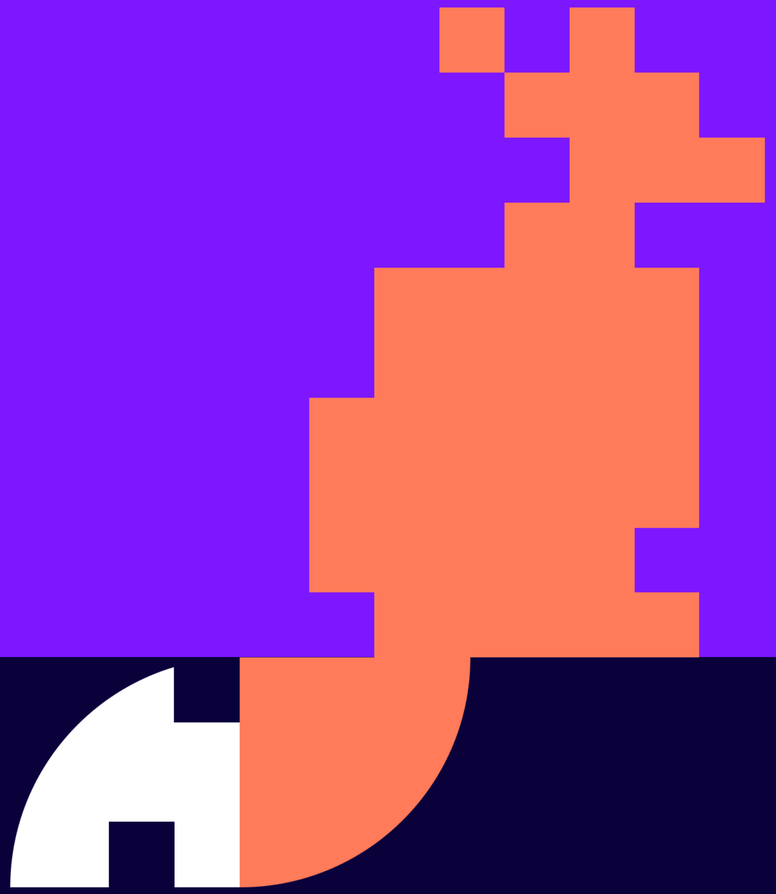
Enables collaboration in all kinds of web applications

Will be implemented via the *Open Collaboration Service Process*



Demo

TypeFox



Questions?