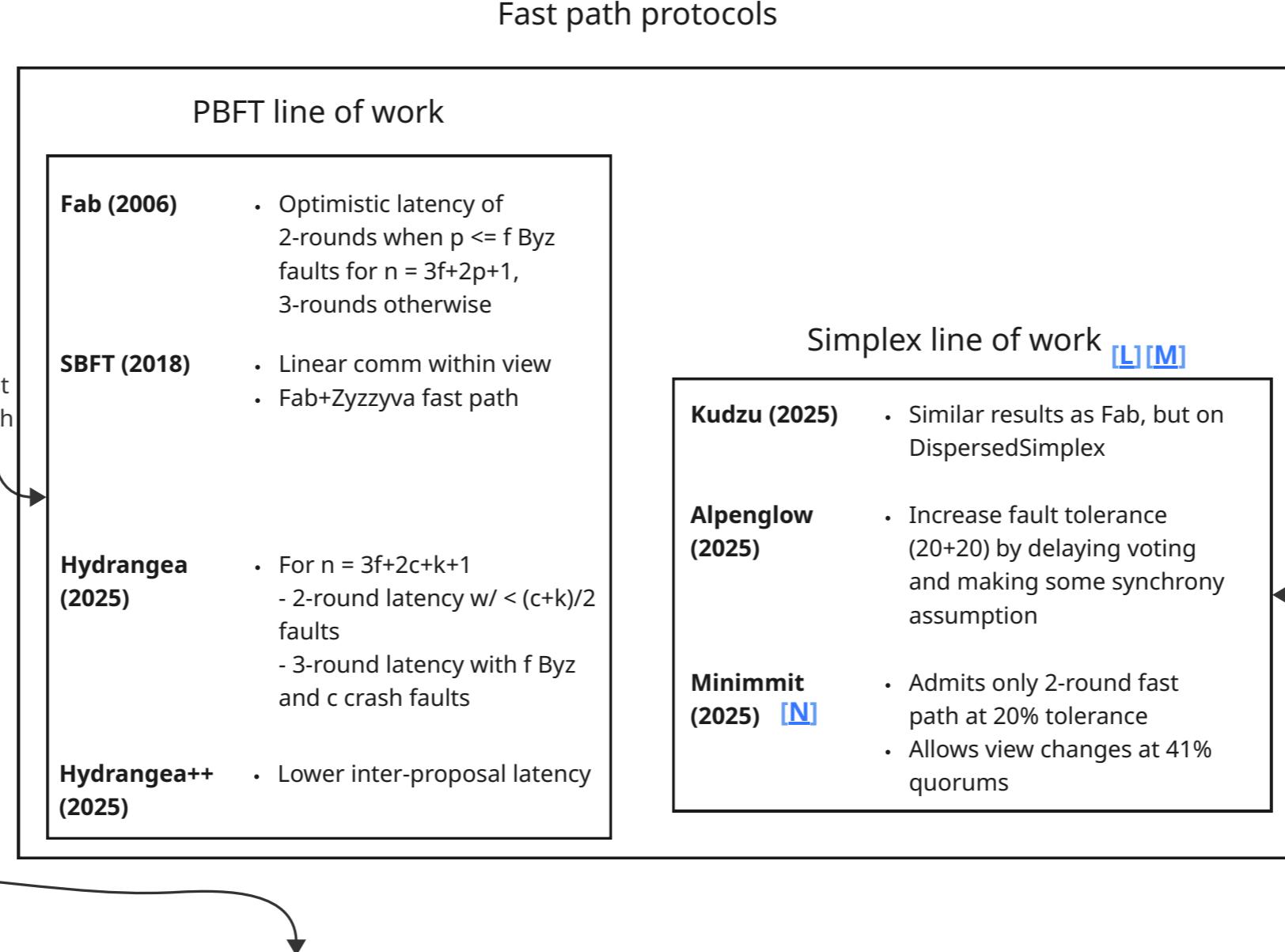


Partial Synchrony Progress Cheat Sheet

The PBFT line of work [\[A1, A2\]](#)

Walkthrough this page: [link](#)
Decentralized thoughts: [post](#)

PBFT (1999)	<ul style="list-style-type: none"> Tolerates 1/3 Byz faults, 3-round good-case latency, $O(n^2)$ comm in each view, View change requires sending $O(n)$ certificates
Casper (2017)	<ul style="list-style-type: none"> Introduced accountability, chaining in BFT
Tendermint (2018) [C1, C2]	<ul style="list-style-type: none"> View change requires sending $O(1)$ certificates
HotStuff (2018)	<ul style="list-style-type: none"> Linear communication within view and during view change, 7-round good-case latency
Fast-HotStuff (2020)	<ul style="list-style-type: none"> Optimistically improving HotStuff
HotStuff-2 (2023)	<ul style="list-style-type: none"> Improving HotStuff to 5-round good-case latency



Simplex line of work [\[L\]\[M\]](#)

Kudzu (2025)	<ul style="list-style-type: none"> Similar results as Fab, but on DispersedSimplex
Alpenglow (2025)	<ul style="list-style-type: none"> Increase fault tolerance (20+20) by delaying voting and making some synchrony assumption
Minimmit (2025) [N]	<ul style="list-style-type: none"> Admits only 2-round fast path at 20% tolerance Allows view changes at 41% quorums

The Simplex line of work [\[D\]](#)

ICC (2021) [H]	<ul style="list-style-type: none"> Tolerates 1/3 Byz faults, 3-round good-case latency, Every view has a block certificate, uses multiple proposers to ensure this Supports erasure coding
Simplex (2023) [I]	<ul style="list-style-type: none"> 3-round good-case latency, $O(n^2)$ comm in each view view-change cert \Rightarrow no decision in view
Dispersed Simplex (2024)	<ul style="list-style-type: none"> Simplex + erasure coding

