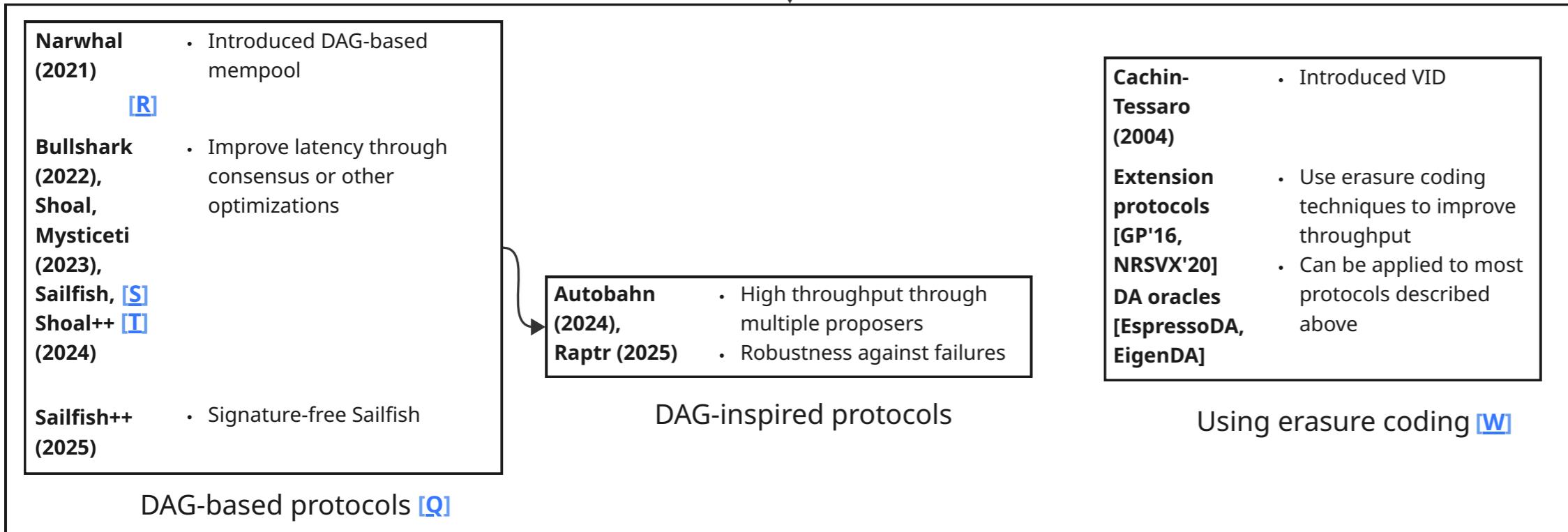
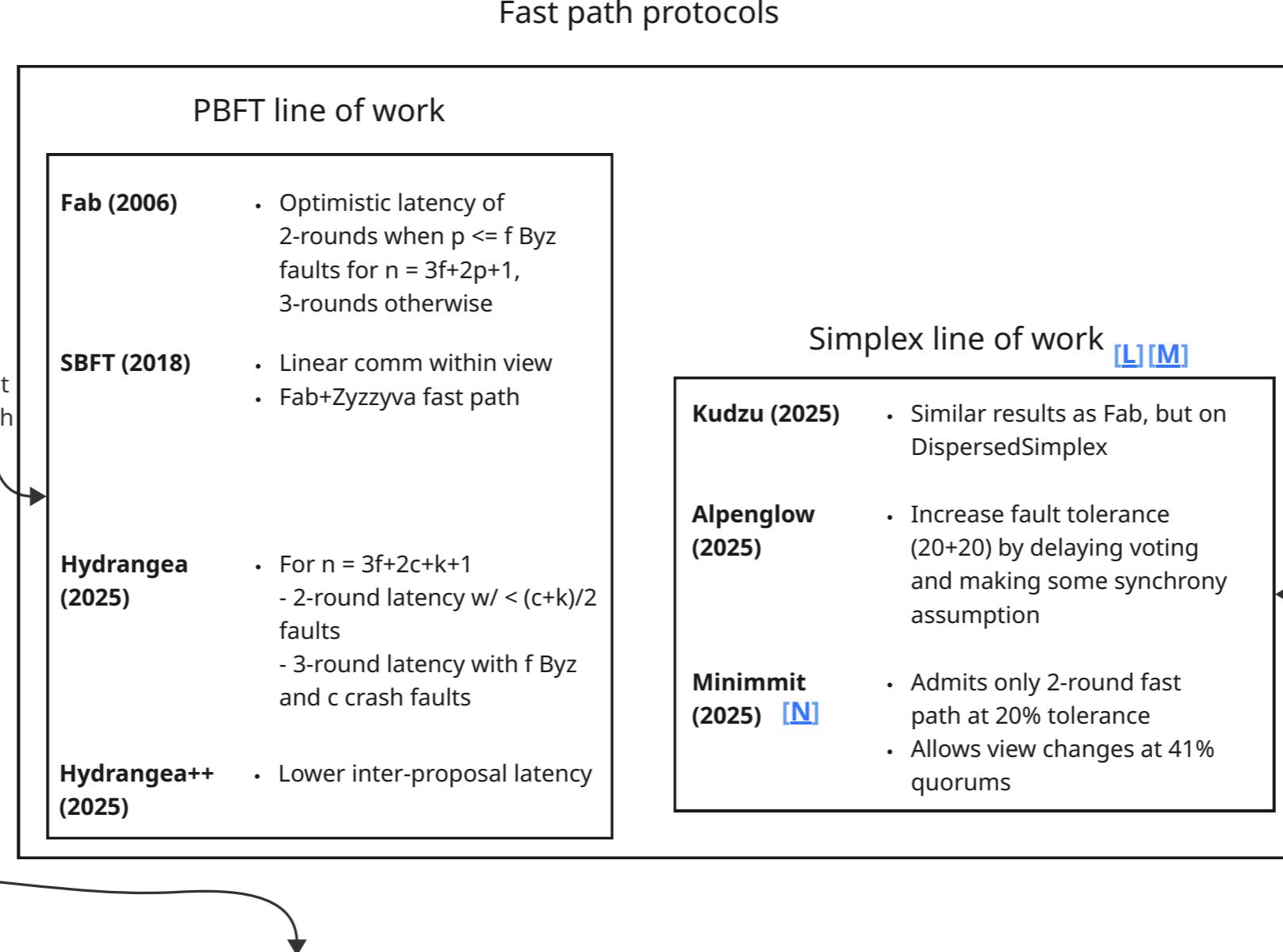


Partial Synchrony Progress Cheat Sheet

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, [B1, B2] 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



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