

Same-device Wallet Invocation	CHAPI	OIDC/SIOP	Notes/Comments	
Provides ecosystem wallet selector (mediator) that enables both registration/de-registration of a wallet and selection when invoked	✓	✗	CHAPI has a rich mediation layer enabling registration and de-registration and selection of any wallet when invoked. OIDC SIOP is currently limited to RP curated lists of which providers it supports or custom URL schemes that have several known limitations	
Compatible with the addition of a mediation layer		✓	CHAPI is a mediation layer, OIDC and SIOP are protocols, ones that can include a mediation layer -- if this is true, then OIDC/SIOP is not a "Same-Device Wallet Invocation" mechanism and should instead go on the Presentation Exchange sheet... right?	
Works in all browsers with >1% marketshare with default settings	✓	✓	CHAPI relies on 3rd party storage to work with wallet registration, this does not work in Brave (< 1% marketshare) and only works in Safari if the user "consents to tracking from auth.io " resulting in substandard UX. Future changes to CHAPI could enable 1st party flows to avoid 3rd party storage. Some OIDC flows MAY make use of things like iframes and 3rd party cookies resulting in some user session related issues, however, these flows are usually recoverable without complex user intervention, but unexpected failures in session management may pose security and privacy risk to users (citation needed). However note the limitations highlighted w.r.t OIDC and 3rd party cookies can also affect CHAPI based wallets depending on how they choose to perform user authentication (and whether this involves the usage of a 3rd party domain e.g an auth server)	
Inline Web wallet interaction	✓		OIDC/SIOP could support this only with the addition of an appropriate mediation layer though like CHAPI	
Redirect-based Web wallet interaction		✓	Redirect-based interaction can be done in CHAPI if needed; it's avoided for now due to the substandard UX	
Native wallet interaction	✓	✓	Invocation of oidc:// can result in no action by OS if no wallet is installed	
Not affected by browser changes	✗		Redirection parameters at risk due to privacy concerns (Note this is a very widely used browser primitive and would be a massive disruption to the entire web to unilaterally rule out their usage). OIDC uses primitives in a way that is indistinguishable from trackers, hence FedCM project exists. CHAPI does not work Brave (< 1% marketshare) and has substandard UX in Safari (requires user consent to tracking) because of its dependence on 3rd party storage. CHAPI can be updated to use 1st party storage to avoid this issue but it would cause a non-unified UX (this probably a better trade off however). however is very important to note in this model where CHAPI is using 1st party storage, will then likely require the usage of redirection parameters, hence meaning the issues highlighted a become applicable to CHAPI also. Since both technologies rely on browsers, both have access to the same primitives and are affected by any changes to those primitives. CHAPI has a single mediator that can be updated more quickly in response to changes, but OIDC is based on an OpenID standard that is widely deployed -- each of these being mitigations or disincentives to potential browser changes. However, Apple in particular has shown that it is not necessarily concerned with other company/industry implementations when it makes browser changes.	Tobias: We need to be more nuanced on the points being made in the box to the left here. For example describing what browser API's are core to the two protocols (note not optional, it is inaccurate to say OIDC relies on I-Frames or cookies), what the likelihood of these changing is and what the predicted impact would be given certain scenarios manifesting. CHAPI (today) relies on 3rd party storage, i-frames, postMessage API and WebShare, the only hard dependency that OIDC relies upon is redirects featuring query parameters. Therefore I believe it is accurate to say that CHAPI's exposure and reliance on browser primitives is greater than OIDC, making its susceptibility to changes in the browser environment affecting CHAPI based flows greater. 3rd party storage in particular appears to be a primitive that browser vendors are closing in on actively, while it is true that similar conversations around redirect parameters carrying query parameters is occurring, the likelihood and impact of these different changes is not directly comparable.
Wallet suggestions (if no wallet)	✓	✗		
Just in time wallet installation	✓			
Wallet feature hinting	✓	✓	Wallet feature hinting allows a RP to state the wallet qualities it requires w/o doing wallet vendor detection. Features of the wallet are communicated via client metadata and provider metadata	
Works on desktop/laptop	✓	✓		
Works on mobile	✓	✓		
Global standard	✗		While OpenID is a widely deployed standard, OIDC4VCI and OIDC4VP are not	
More than 10 developer libraries	✗		While OpenID has many libraries, OIDC4VCI and OIDC4VP do not - CHAPI only requires one polyfill library (ever)	
Does not require use of single domain mediator	✗	✓		
Does not require every RP to opt-in to the user's wallet of choice	✓	✗	CHAPI requires RPs and wallets to be compatible on features only. OIDC requires feature compatibility and vendor allow lists.	
Not susceptible to browser cache clearing	✗	✓	OIDC is not susceptible to browser cache clearing because providers must be listed on relying party sites. As long as the user's provider of choice is listed, this is not a problem. If the user's choice is not listed, they cannot use their provider at all. This item could be reframed because CHAPI is providing a feature that allows a user to see their wallet choices (except when they clear their browser cache / storage) and, with OIDC, the user will never see their wallet choice unless the RP allow lists it. The framing here erroneously makes it seem like OIDC has an advantage when the opposite is true.	
Does not have centralized development/governance			While the CHAPI mediator is developed and operated by Digital Bazaar at present, it is intended to be a community project, and will be run by a cooperative with clear and simple governance in production. Also, what's up with the lady with brown hair -- what does she signify?	
Redirect failures don't break RP flows	✓	✗	Redirections cause changes in client state. This can result in users losing their path back to the RP flow where they started, getting lost in redirection loops, or authentication confusion with multiple accounts. RPs must plan or change their flows to avoid loss of client state due to redirects or provide other out-of-band escape hatches, if possible, when redirections do not execute properly. This is mostly highlighting a difference in UX. FedCM hopes to help fix some of these problems.	
Does not force RP-provided wallet choices	✓	✓	This again is just restating the mediation layer again, suggest we remove	

Does not rely on access to 3rd party storage		✓	CHAPI relies on it today but this can be changed so it doesn't, including without redirects, but with substandard UX. OIDC session management relies on 3rd party storage and users may experience privacy risk if they try to log out and it fails across RPs due to browser limitations on 3rd party storage.
Allows decentralized wallet feature updates	✓	✓	CHAPI uses Web app manifests to express Web wallet information that can be updated independently by wallet providers. OIDC can have any wallet form
Cross-device Wallet Invocation	QR Code	BLE	
Transmit VPR	✓	✓	
Transmit DIDComm introduction	✓	✓	
Transmit OpenID Discovery URL	✓	✓	

