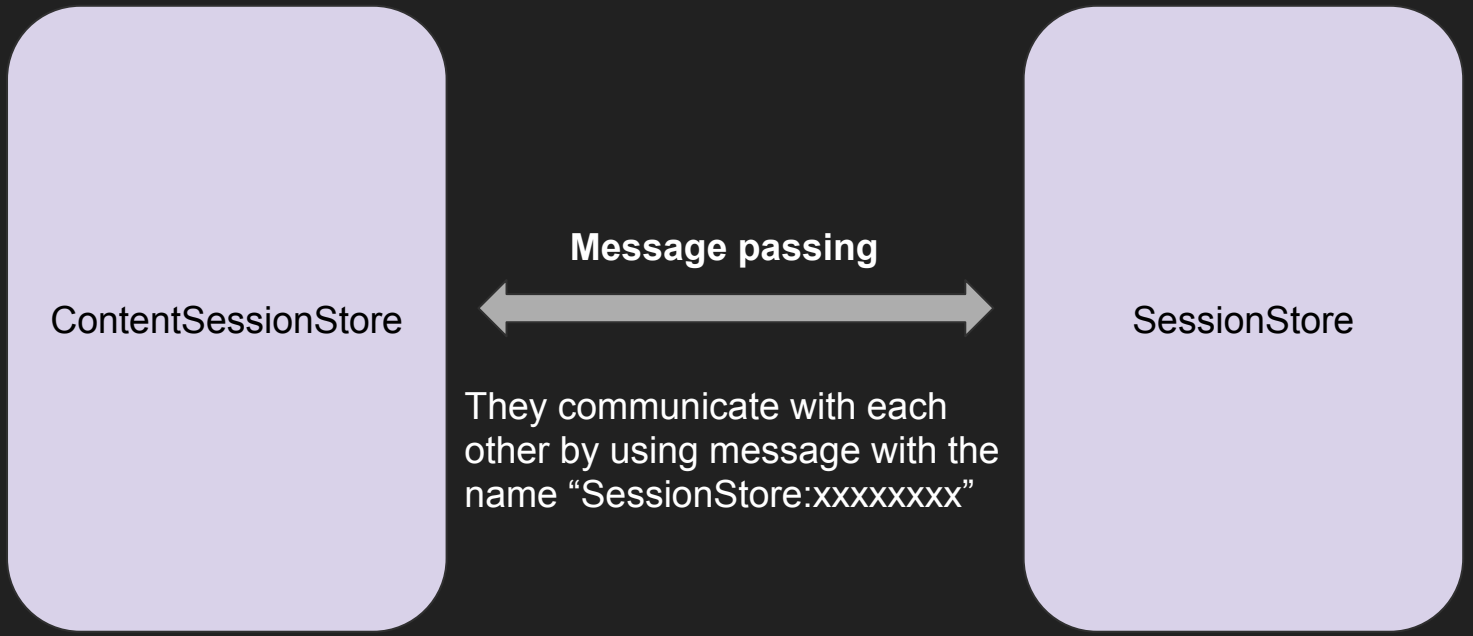
ContentSessionStore.jsm C++ rewriting

Ver 1.0 Feb 28

How to accomplish it?

- Stage I:
  - Implement ScrollPositionListener, FormDataListener, DocShellCapabilitiesListener, PrivacyListener in C++.
  - Use ipdl to send collected data from content to parent.
- Stage II:
  - Implement SessionStorageListener in C++
- Stage III:
  - Take care of SessionHistoryListener if needed
- Stage IV:
  - Rewrite the restore related function in contentSessionStore.jsm
  - Then we can get rid of contentSessionStore.jsm and content-sessionStore.js

Original Design



Original Design

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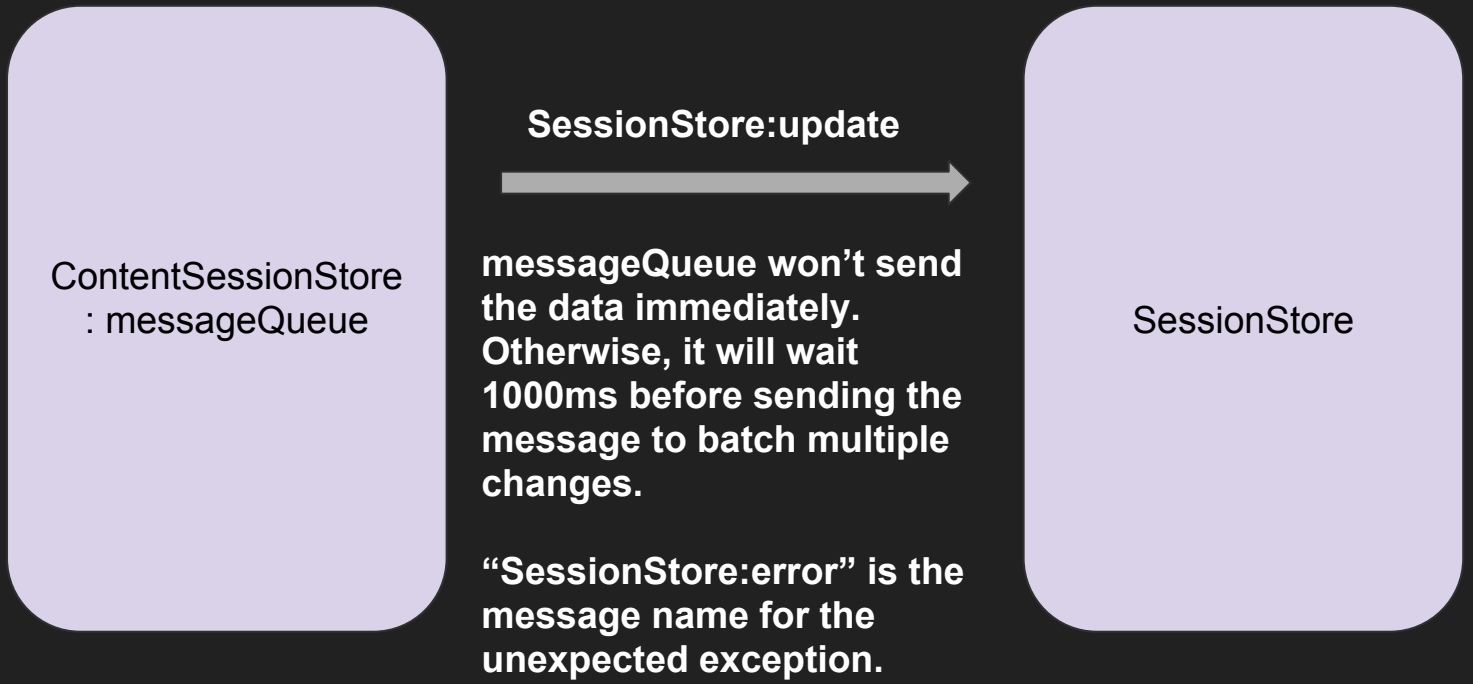
push(key, fn):
key: A Unique id specific to the type of data
fn: Collect function which return the value that will be sent

messageQueue.push() is used by listeners when specific conditions happen.

In push(), a given value is pushed onto the queue. The given |key| represents the type of data that is stored and can override data that has not been sent to the parent process.

Original Design



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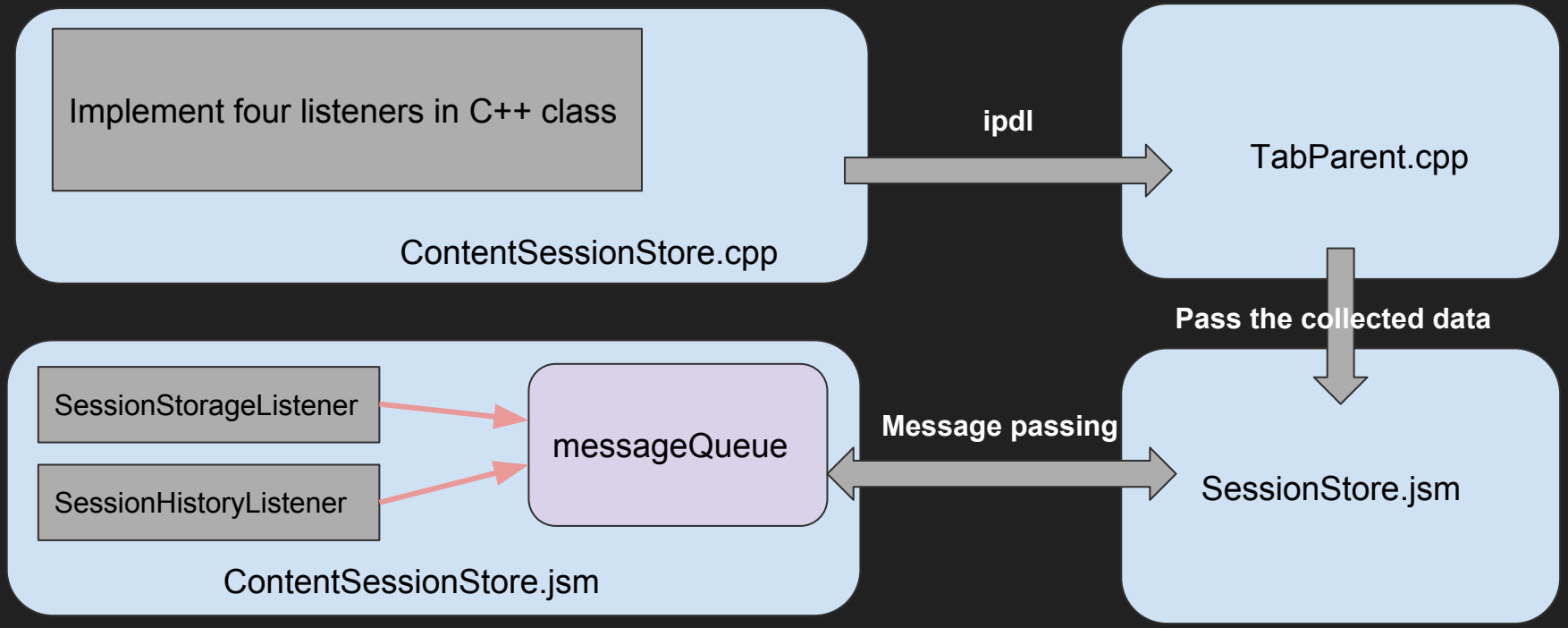
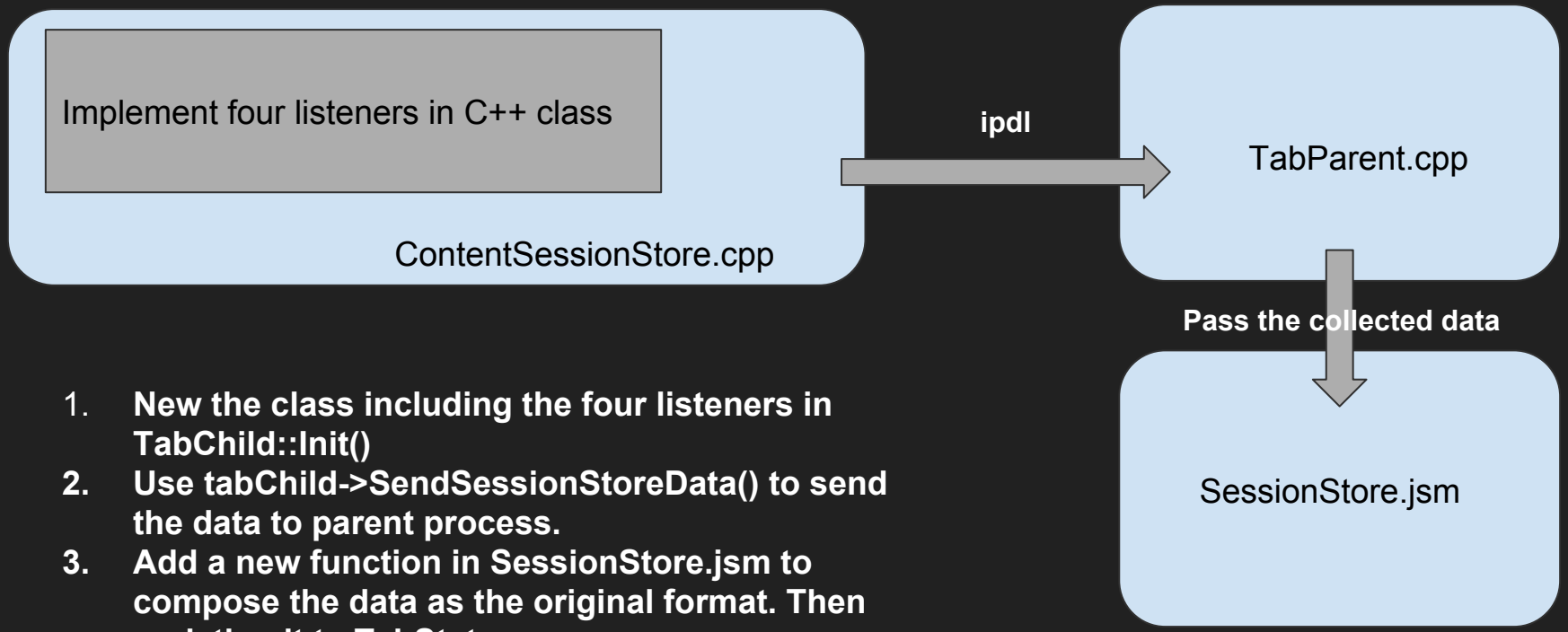
Stage 1


Implement four listeners in C++ class
ContentSessionStore.cpp
ipdl
TabParent.cpp
Pass the collected data
SessionStorageListener
SessionHistoryListener
messageQueue
ContentSessionStore.jsm
Message passing
SessionStore.jsm



1. **New the class including the four listeners in TabChild::Init()**
2. **Use tabChild->SendSessionStoreData() to send the data to parent process.**
3. **Add a new function in SessionStore.jsm to compose the data as the original format. Then updating it to TabState.**
4. **In “RecvSessionStoreData()”, passing the data by the new function mentioned in step 3.**

Discussion

1. How to pass the data to sessionStore.jsm from TabParent.cpp?
   a. (XPCOM) Find/Create a suitable JS XPCOM component.
   b. (Event) Use nsIObserverService
2. Do we need to keep the restore functionality in ContentSessionStore.jsm after finishing stage III?