

从向 W3C 提案 展望 Web App 的发展

鼎道智联 宋庆林
2022年9月

自我介绍

宋庆林

鼎道智联（北京）科技有限公司
架构师



W3C 与 鼎道智联



鼎道智联是一家专注于打造以人为本，基于设备的，智能推荐并交付物联网服务的操作系统（DingOS）公司。

DingOS 基于端、边、云架构，协同物联网设备，通过 PWA 为用户提供易于使用，安全、稳定、高效的服务体验。



为什么加入 W3C



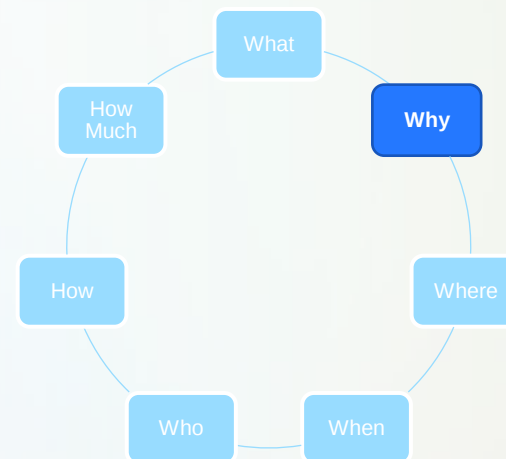
与全球IT/互联网企业联手，直接参与 Web 相关标准制订

增进参与者对标准的理解

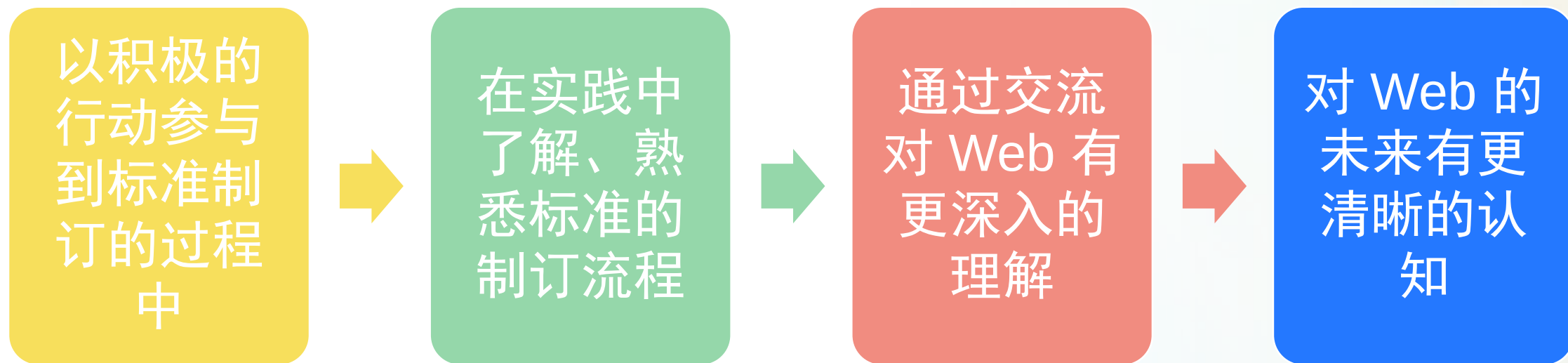
提升公司在行业内的影响力

提高国家在国际标准领域的话语权

为 www 技术标准化做出贡献



为什么“提案”



从一个提案开始



Add a manifest option for the declaration of the web application running pattern

Add a manifest option for the declaration of the web application running pattern #1019

[Open](#) songql opened this issue on Oct 28, 2021 • 11 comments



songql

commented on Oct 28, 2021 • edited

Member

...

We found that when we are having multiple instances of a PWA simultaneously, a race condition would occur that corrupts local data and causes undefined behaviors.

We will use [Sudoku Game PWA](#) to illustrate the problem we detected. Sudoku Game PWA would automatically save unfinished games after closing and reload the unfinished game when reopening. The unfinished game would be stored on our local machines.

- Scenario I: When we only have one Sudoku Game PWA running, the application runs perfectly without any problems including saving and reloading.
- Scenario II: When we have two running Sudoku Game PWAs named Sudoku A and Sudoku B, we can play two games at the same time normally. However, if we close Sudoku A first, then close Sudoku B, we can only reload the game played by Sudoku B from newly created Sudoku PWAs.

After exploring our local files, we determined that Sudoku B had overwritten the data saved by Sudoku A.

On operating systems level, some applications are designed to have only one running instance. Most notable such applications are web browsers such as Firefox and Chrome. Some PWAs should also be restricted from having multiple instances for various reasons.

Therefore, it is curial to add pattern member to the current manifest standards which helps PWA and browser developers alike to better handle multi-instance PWAs and single-instance PWA concurrently.

The proposal here is for a new optional "pattern" member to be added to the manifest. The default value of this member is "non-singleton" for PWAs that are expected to have multiple instances. This member is setted to "singleton" for single-instance-only PWAs.

(We have considered the naming of the manifest member, including "mode" and "instance", and finally decided that "pattern" is more suitable.)

Below is the recommended member and value set for the manifest:

```
{
  "pattern": "singleton" // enum: non-singleton(default), singleton
}
```

For more details about the proposal, please refer to the following discussion:

Assignees

No one—assign yourself

Labels

[Feature Request](#)

Projects

None yet

Milestone

No milestone

Development

[Create a branch](#) for this issue or link a pull request.

Notifications

Customize

[Unsubscribe](#)

You're receiving notifications because you're watching this repository.

4 participants



[Lock conversation](#)

[Pin issue](#)

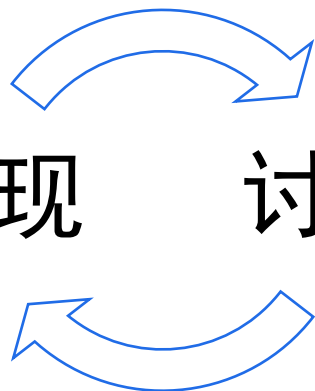
[Transfer issue](#)

从一个提案开始



Add a manifest option for the declaration of the web application running pattern Web App Launch Handling

实现 讨论



Add a manifest option for the declaration of the web application running pattern #1019

songqi opened this issue on Oct 28, 2021 · 11 comments

songqi commented on Oct 28, 2021 · edited

We found that when we are having multiple instances of a PWA, it causes undefined behaviors.

We will use **Sudoku Game PWA** to illustrate the problem we encountered. When we close the game on one machine, the game will be reloaded on another machine.

- Scenario I: When we only have one Sudoku Game PWA on a machine, including saving and reloading.
- Scenario II: When we have two running Sudoku Game PWAs on the same time normally. However, if we close Sudoku A first, then we reload Sudoku B from newly created Sudoku PWAs.

After exploring our local files, we determined that Sudoku B is not a singleton.

On operating systems level, some applications are designed to be singletons, such as Firefox and Chrome. Some PWAs are not singletons.

Therefore, it is crucial to add pattern member to the current manifest to better handle multi-instance PWAs and single-instance PWAs.

The proposal here is for a new optional "pattern" member to the manifest for PWAs that are expected to have multiple instances.

(We have considered the naming of the manifest member, and "pattern" is more suitable.)

Below is the recommended member and value set for the manifest.

```
{  "pattern": "singleton" // enum: non-singleton(default), singleton  }
```

For more details about the proposal, please refer to the following document:

WICG / sw-launch

Public

Watch 18 Fork 22 Star 39

Code Issues 12 Pull requests 1 Actions Projects Security Insights

main sw-launch / launch_handler.md

Go to file

alancutter Branch: explainer-fixups ✓ Latest commit 5ffe786 on May 23 History

4 contributors

282 lines (228 sloc) 11.2 KB

Web App Launch Handling

Authors: alancutter@chromium.org, mgiuca@chromium.org, dominickn@chromium.org
Last updated: 2022-03-03

Overview

Some web apps are designed to work in a single window (e.g. a music player) and aren't intended to be used across multiple instances. Web capabilities like [share target](#), [file handlers](#) and [link capturing](#) can cause new instances of the web app to be opened even if an app window is already open, putting the user in a non-ideal state.

This document describes a new `launch_handler` manifest member that lets sites redirect app launches into existing app windows to prevent duplicate windows from being opened.

We found that almost all "launch" use cases could be covered by a select few fixed rules (for example, "choose an existing window in the same app, focus it, and navigate it to the launched URL"). This `launch_handler` proposal enables sites to specify a set of fixed rules without having to implement custom [service worker](#) `launch` event logic, which should satisfy most use cases, and simplify the implementation in browsers and sites.

Use case

- Single-window web apps: a web app that prefers to only have a single instance of itself open at any time, with new navigations focusing the existing instance.



持续的提案与讨论



➤ 提案

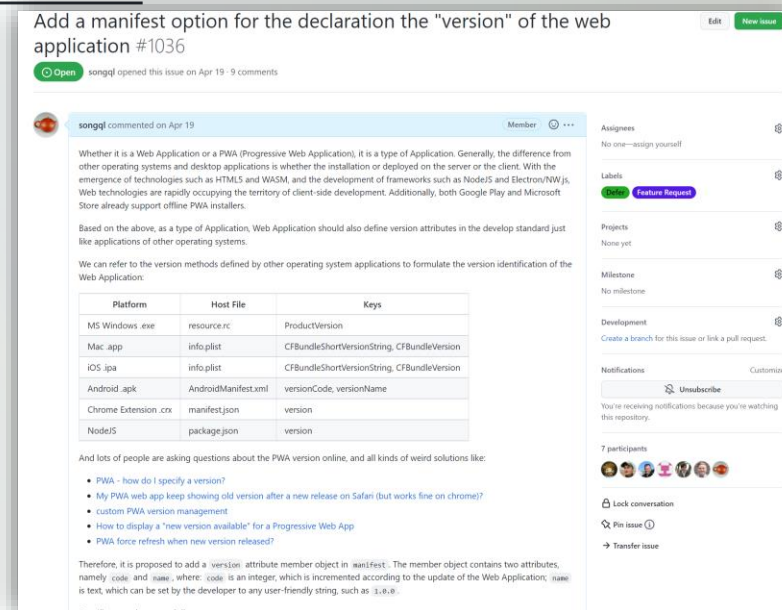
- Add a manifest option for the declaration the "version" of the web application

➤ 讨论

- Feature request: access to menu bar and context menus
- Shortcut item should have an "id" field

➤ 更多

- i18n for Web Application
-



Web 的当下

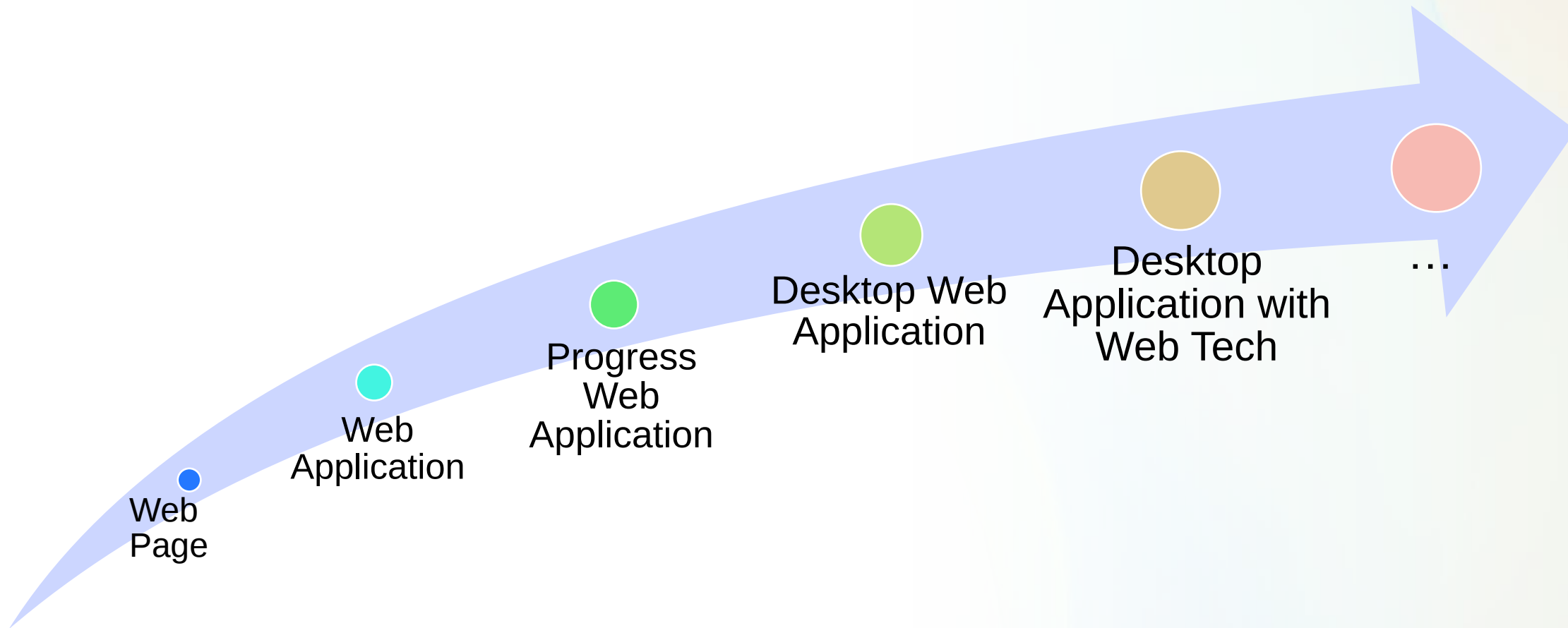


传统 Web: HTML + JavaScript + CSS

服务端 Web: Node.js

桌面 Web: CEF/NW.js/Electron

Web 的未来



Thanks



鼎道智联 宋庆林
2022年9月