

ELECTRON

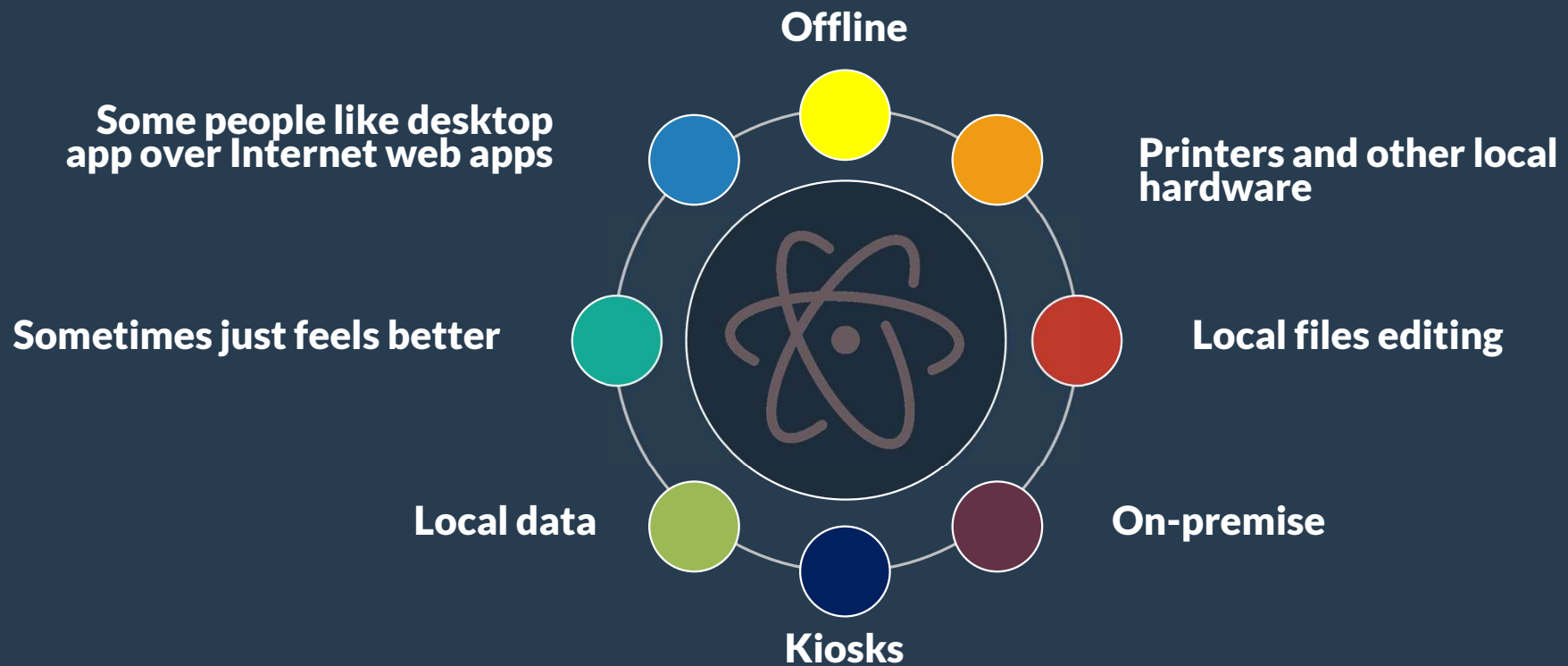
DESKTOP DEVELOPMENT FOR WEB DEVELOPERS



Why do we need
to create desktop apps?



Business Needs for Desktop Apps



Some Ideas for Electron Apps



History of Electron

Project began at GitHub
January 2013





Project Open Sourced
May 2014



Renamed Electron
April 2015



Released version 1.0.0
June 2016

Released Electron Fiddle
August 2018





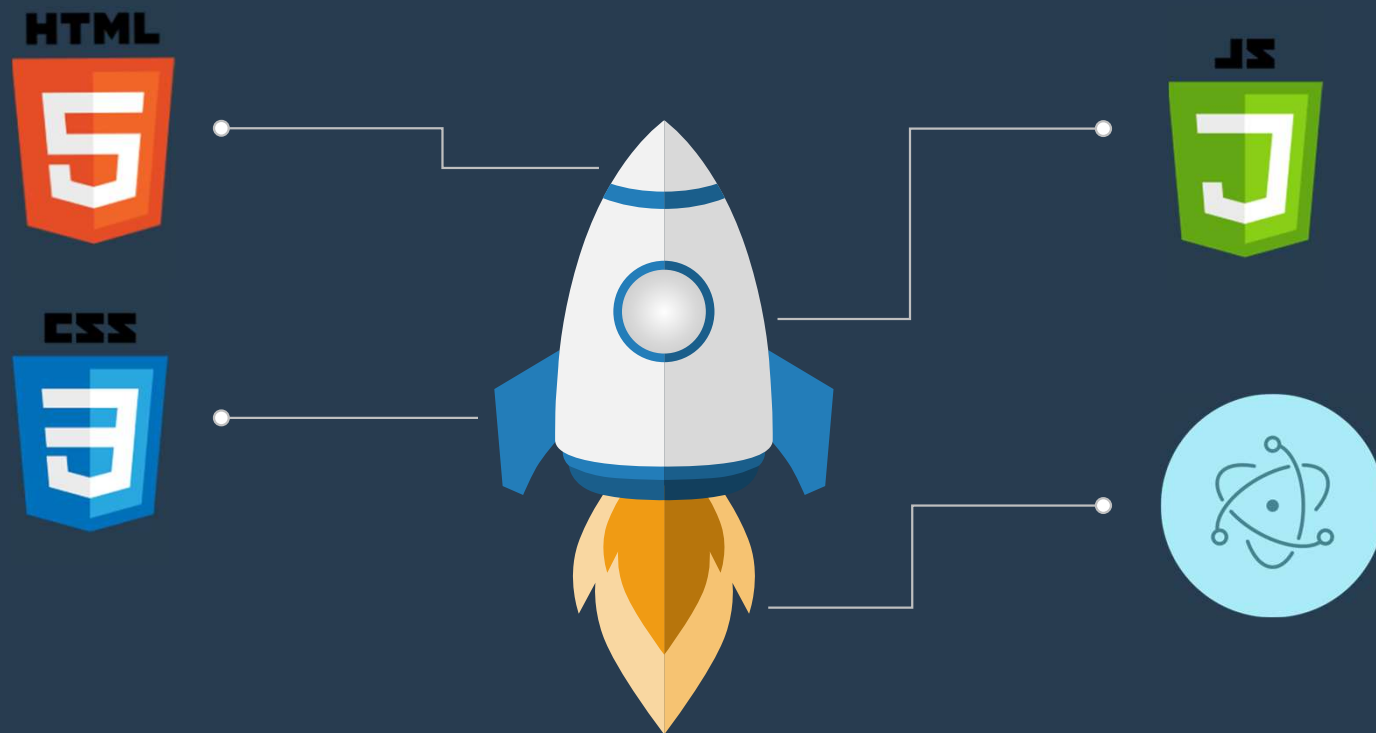
Current version 28.2.2
February 2024



Beta version 29.0.0
Spring 2024



Building Blocks for Electron



Core Features



Web Standards

- HTML
- CSS
- Javascript



File System

You can use all of the Node.js APIs



All Major OS Platforms

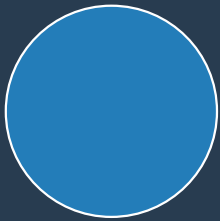
- Windows
- Linux
- macOS
- iOS



Native OS Features

- Menus
- Dialogs
- Notifications

Core Features



Native Installers

npm ecosystem



Auto Updates

Using Squirrel for
macOS and Windows



Analytics Reporting



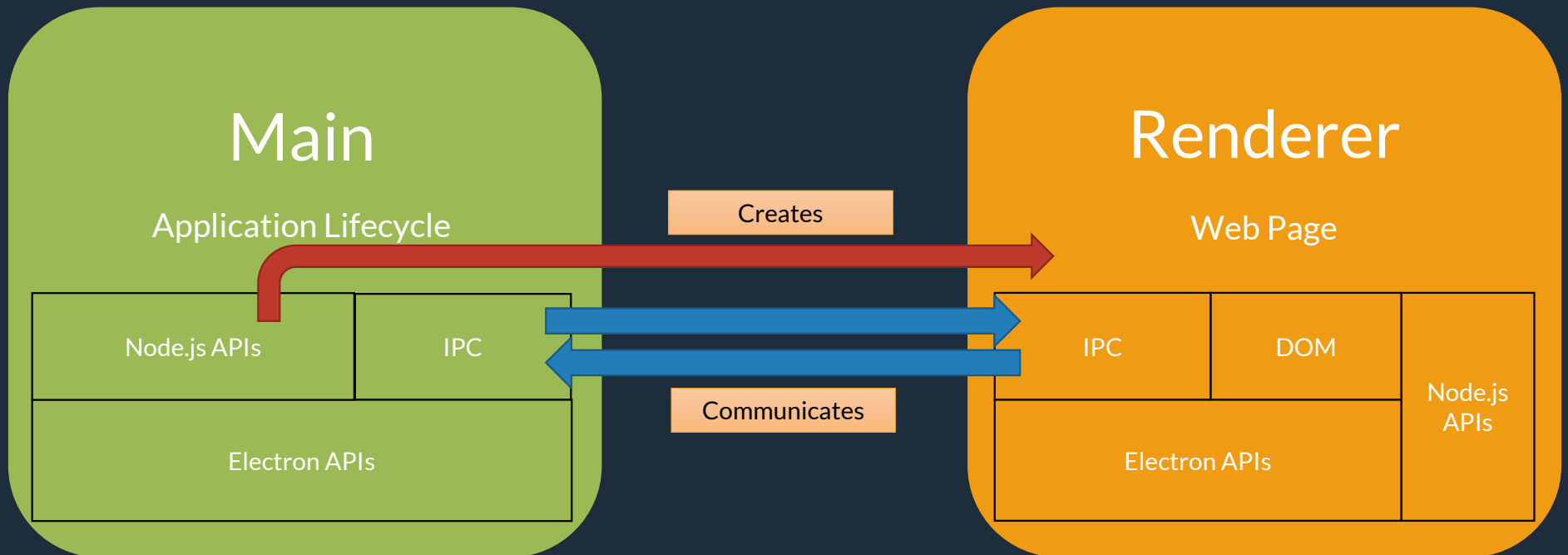
Debugging

All the goodness of you
expect from debugging
in Chrome

What is inside Electron?



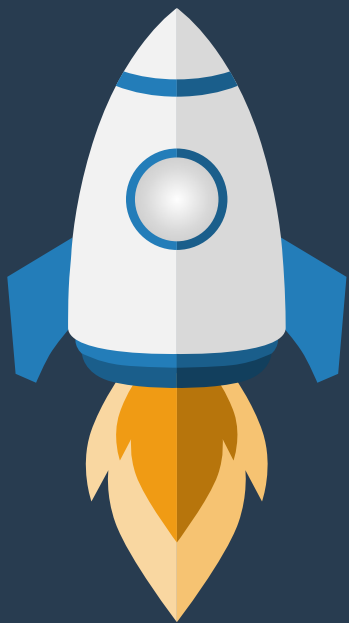
The Two Sides of Electron



The Two Sides of Electron



DEMO



Installation

```
npm install -g electron
```


Structure



package.json



main.js



index.html



renderer.js



preload.js

package.json

```
{  
  "name" : "electron-app",  
  "version" : "0.1.0",  
  "main" : "main.js"  
}
```

main.js

```
const { app, BrowserWindow } = require('electron/main')
const path = require('node:path')

function createWindow () {
  const win = new BrowserWindow({
    width: 800,
    height: 600,
    webPreferences: {
      preload: path.join(__dirname, 'preload.js')
    }
  })

  win.loadFile('index.html')
}

app.whenReady().then(() => {
  createWindow()

  app.on('activate', () => {
    if (BrowserWindow.getAllWindows().length === 0) {
      createWindow()
    }
  })
})
})
```

index.html

```
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <title>Hello World!</title>
  <meta http-equiv="Content-Security-Policy" content="script-src 'self' 'unsafe-
inline';" />
</head>
<body>
  <h1>Hello World!</h1>
  <p>
    We are using Node.js <span id="node-version"></span>,
    Chromium <span id="chrome-version"></span>,
    and Electron <span id="electron-version"></span>.
  </p>
</body>
</html>
```

Execution

electron.

Packaging

```
npm install -g electron-packager
```

```
electron-packager <sourcedir> <appname> --platform=<platform> --arch=<arch> [optional flags...]
```

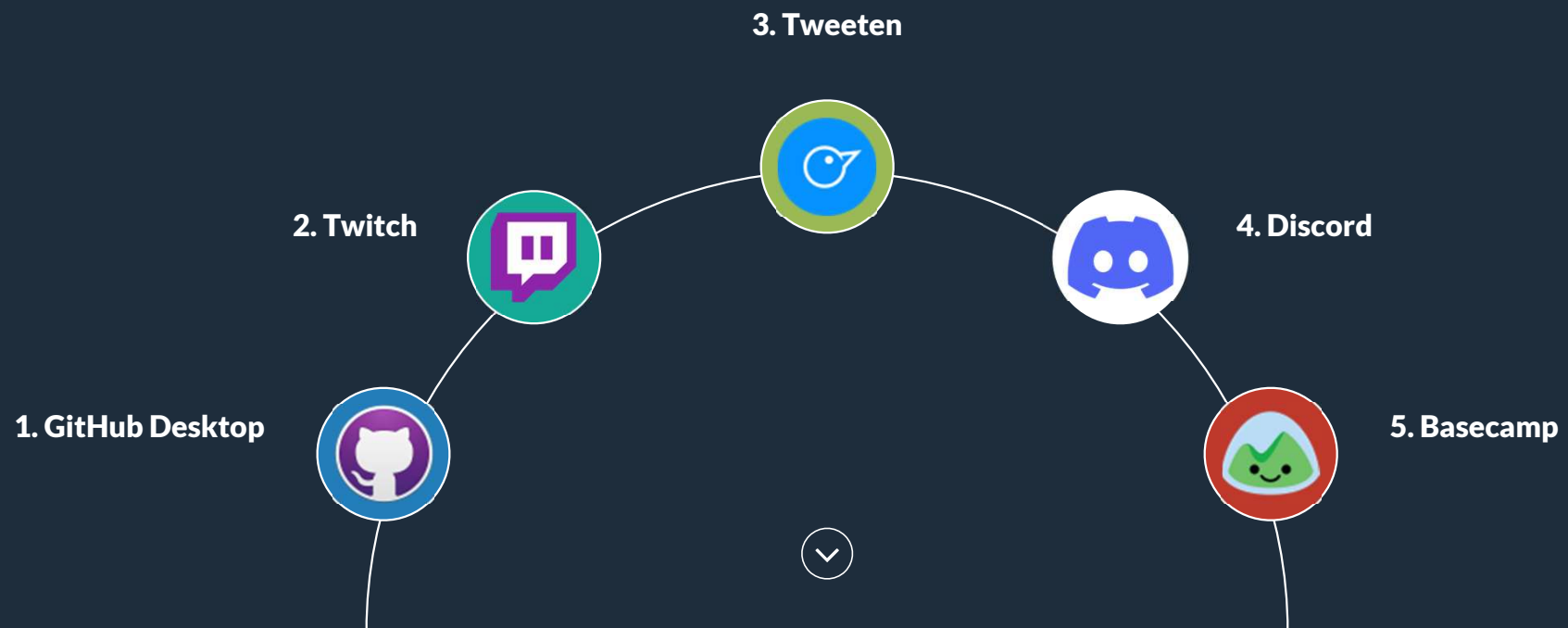
```
electron-packager . --platform=win32 --arch=x64 --out=dist --overwrite  
--prune
```

Packaging

Electron Forge

```
npm install --save-dev @electron-forge/cli  
npx electron-forge import  
npm run make
```

Applications built with Electron



10. Atom Editor



9. Visual Studio Code



9. Slack

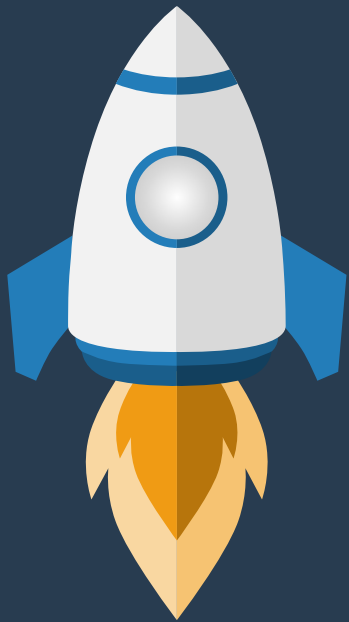


7. Wordpress app

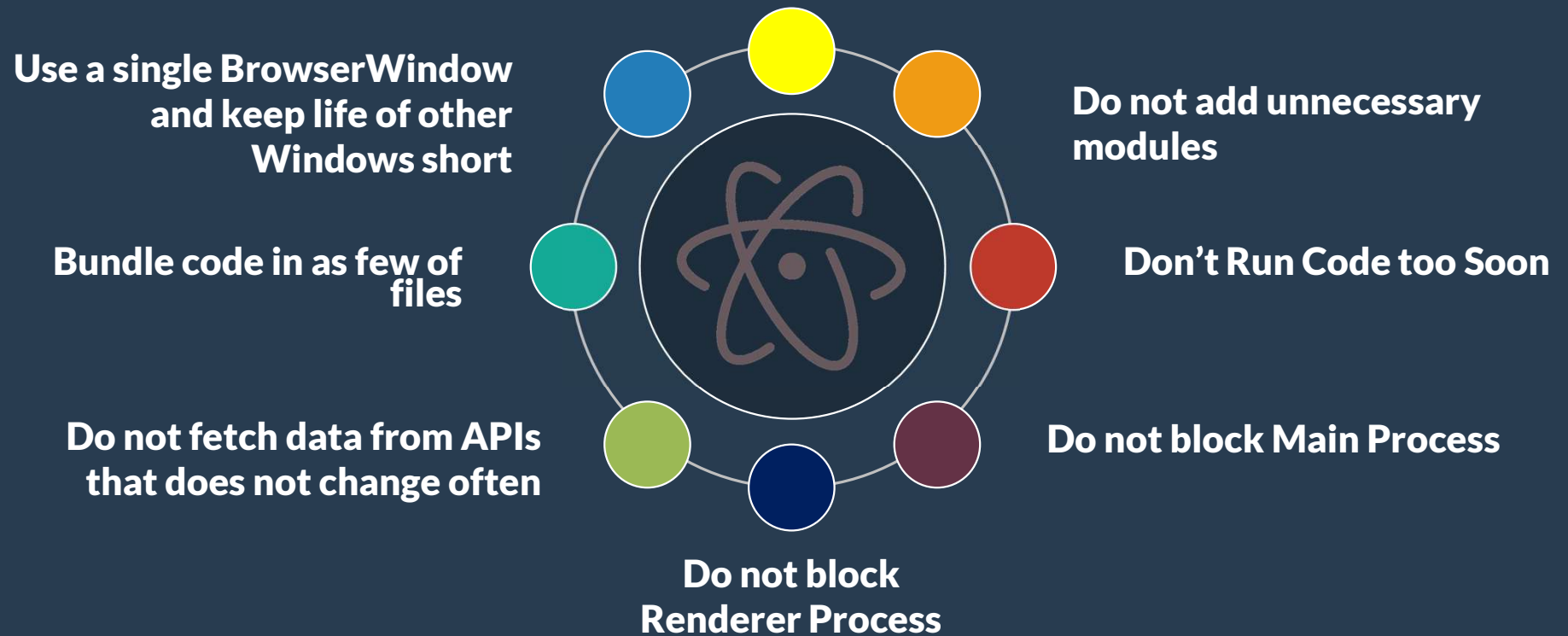


6. Postman

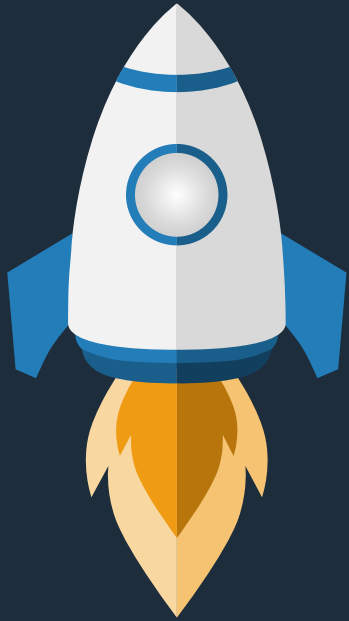
DEMOS



Performance Reminders



Resources



Code for all demos at

https://github.com/cwoodruff/electron_demos



Thanks for Attending

If you have any questions find me after the talk.

Contact me:  woodruff.dev
 [@cwoodruff](https://twitter.com/cwoodruff)
 cwoodruff@live.com