



INTRODUCTION TO THE **SCALABLE** JAVASCRIPT APPLICATION FRAMEWORK

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Introduction

A cupcake with white frosting, colorful sprinkles, and a single lit pink candle sits on a clear glass pedestal. The background is dark and textured.

In each **layer of responsibility**,
modules know each other and the layer below

In each **layer of responsibility**,
modules know each other and the layer below



Your Application Modules

Framework Core

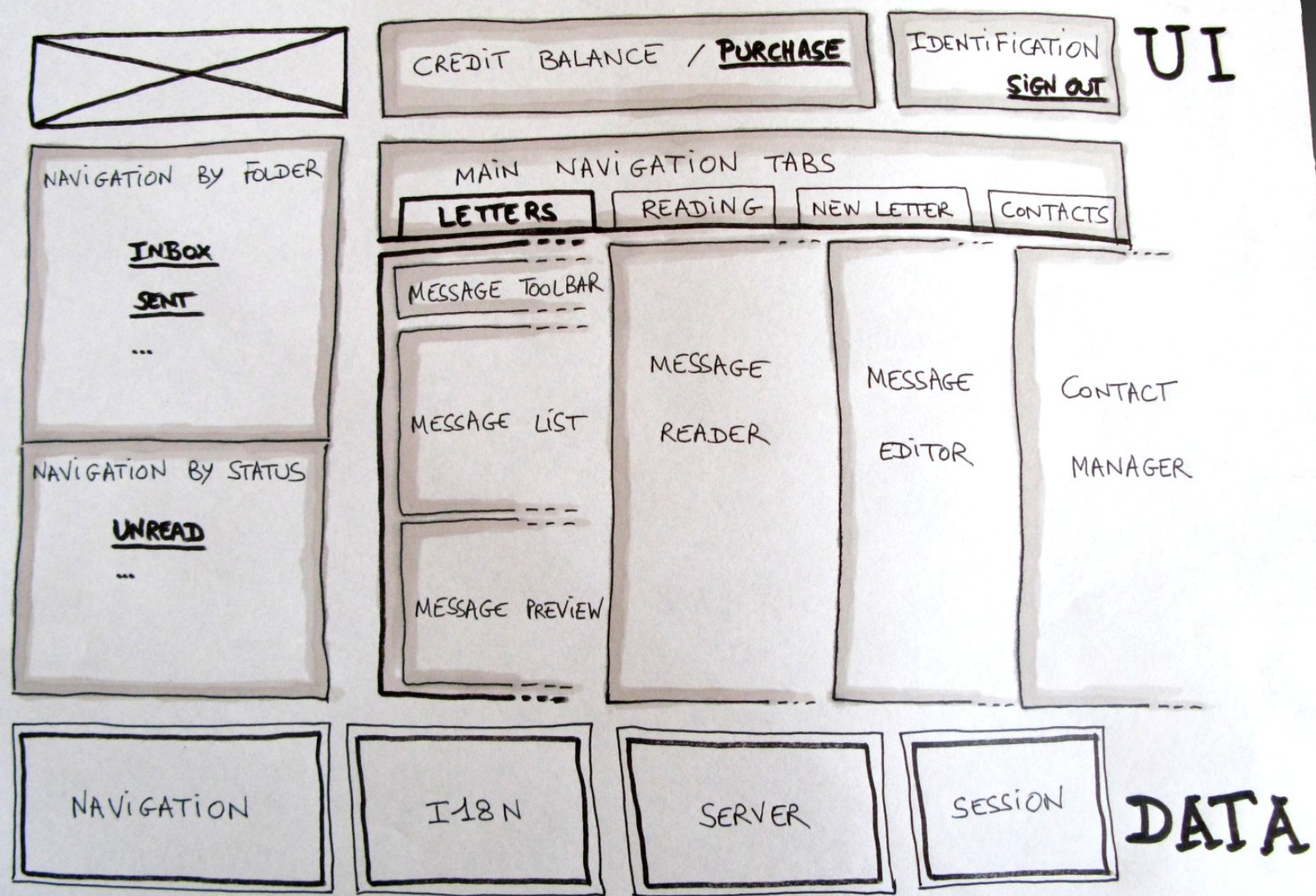
Framework Base

Cross-Browser Library 

Browser JavaScript Engine



THIS
WAY



Application modules don't talk to each other.
They **publish and subscribe** to application events.

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MESSAGE LIST

Date ▼	Sender	Title	Recipients	Status	Type	Folder
27 A	J-D	Re: —	L-F-, F-G	☑ ☑	A ☑	Sent
27 A	M-S	[4-] —	J-H-, M-G	A	A ☑	Inbox
26 A	B-G	— ?	C-D-, A-B	☑	R ☑	Inbox
22 A	S-J	Re: —	L-F-	☑	☑ ☑	Sent
17 A	J-D	— —	C-M, D-H	☑	R ☑	Sent
3 A	L-A	—	M-A	☑	A ☑	Inbox
31 M	L-F-C	—	J-A	☑	A ☑	Inbox
28 M	C-C	—	H-	☑ ☑	☑ ☑	Inbox

CLICK
DOUBLE-CLICK

— MESSAGE
SELECTED —

— OPEN
MESSAGE —

SANDBOX

— NEW MESSAGE LIST —

— NEW MESSAGE —

— NAVIGATION CHANGE —

A man is sitting in a red armchair that is placed on a skateboard. He is on a brick sidewalk next to a street. He is holding a coffee cup and looking away. The text overlay reads: "Each application module works in **isolation** with its **sandbox**, oblivious to the outside".

Each application module works in **isolation** with its **sandbox**, oblivious to the outside

Each application module works in **isolation** with its **sandbox**, oblivious to the outside

MESSAGE LIST

Date	Sender	Title	Recipients	Status	Type	Folder
27 A	J-D	Re: —	L-F, F-G			Sent
27 A	M-S	Co-?	2-H, M-C			Inbox
27 A	B-G	— ?	C-D, A-P			Inbox
27 A	S-J	Re: —	L-F			Sent
27 A	J-D	—	G-M, D-N			Sent
28 A	L-A	—	M-A			Inbox
31 M	L-F-C	—	J-A			Inbox
28 M	C-C	—	M-			Inbox

— MESSAGE
SELECTED —

— OPEN
MESSAGE —

SANDBOX

getId(), getBox(), isInBox()

getClasses(), addClass(),
removeClass()

CSS

\$(), element(), fireEvent(),
addListener()...

DOM

subscribe()
publish()
...

EVENTS
PUBLISH

— NEW MESSAGE LIST —

— NEW MESSAGE —

— NAVIGATION CHANGE —

CLICK
IN-BOX-CLICK

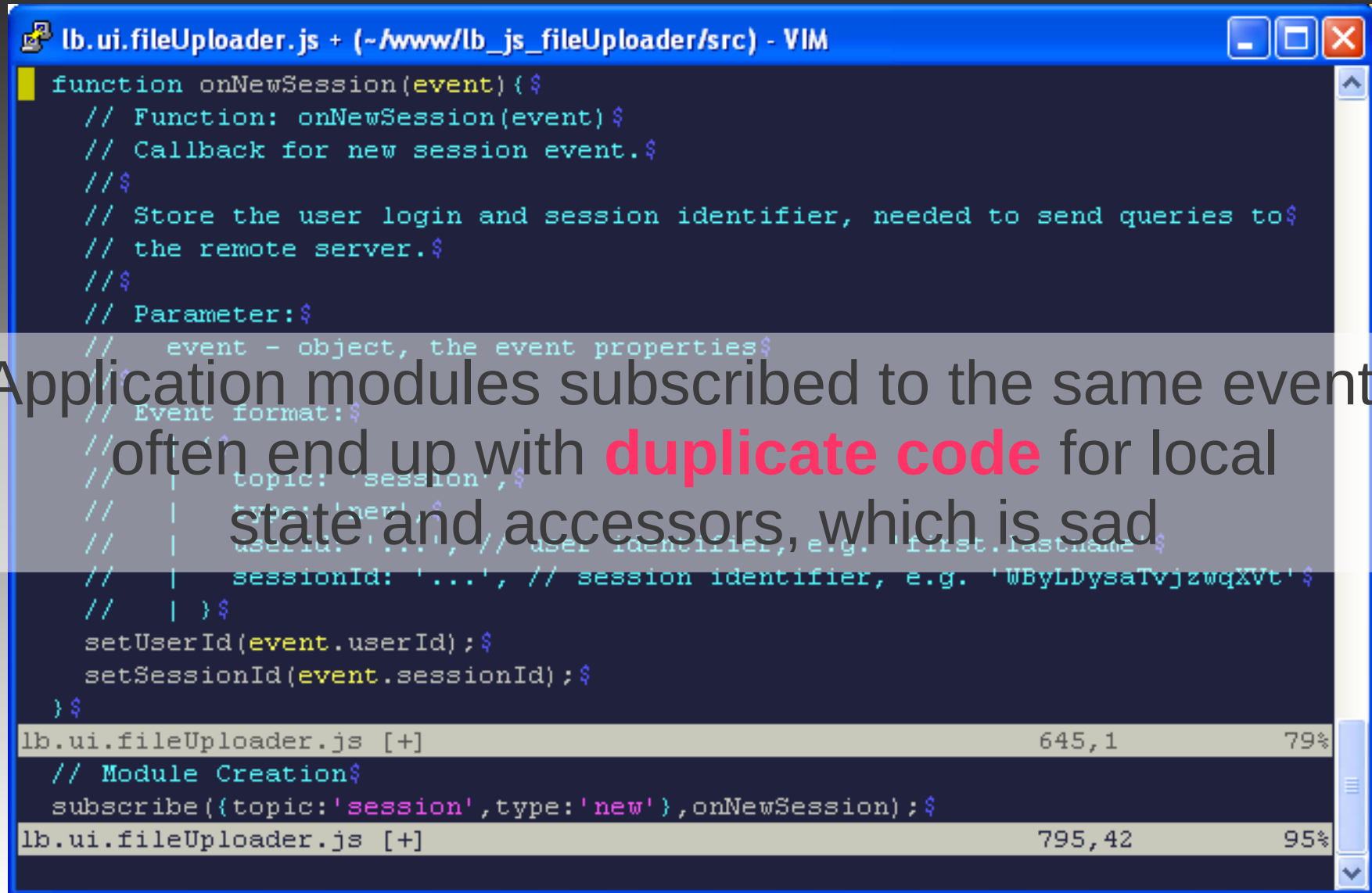


Pros and Cons



Publish/subscribe and sandboxing
result in **loose coupling**, which is nice

Application modules subscribed to the same events often end up with **duplicate code** for local state and accessors, which is sad



```
lb.ui.fileUploader.js + (~/.www/lb_js_fileUploader/src) - VIM

function onNewSession(event){$
  // Function: onNewSession(event)$
  // Callback for new session event.$
  //$
  // Store the user login and session identifier, needed to send queries to$
  // the remote server.$
  //$
  // Parameter:$
  //   event - object, the event properties$
  // Event format:$
  //   | topic: 'session', $
  //   | type: 'new' $
  //   | userId: '...', // user identifier, e.g. 'first.lastname'$
  //   | sessionId: '...', // session identifier, e.g. 'WByLDysaTvjzWqXVt'$
  //   | }$
  setUserId(event.userId);$
  setSessionId(event.sessionId);$
}$

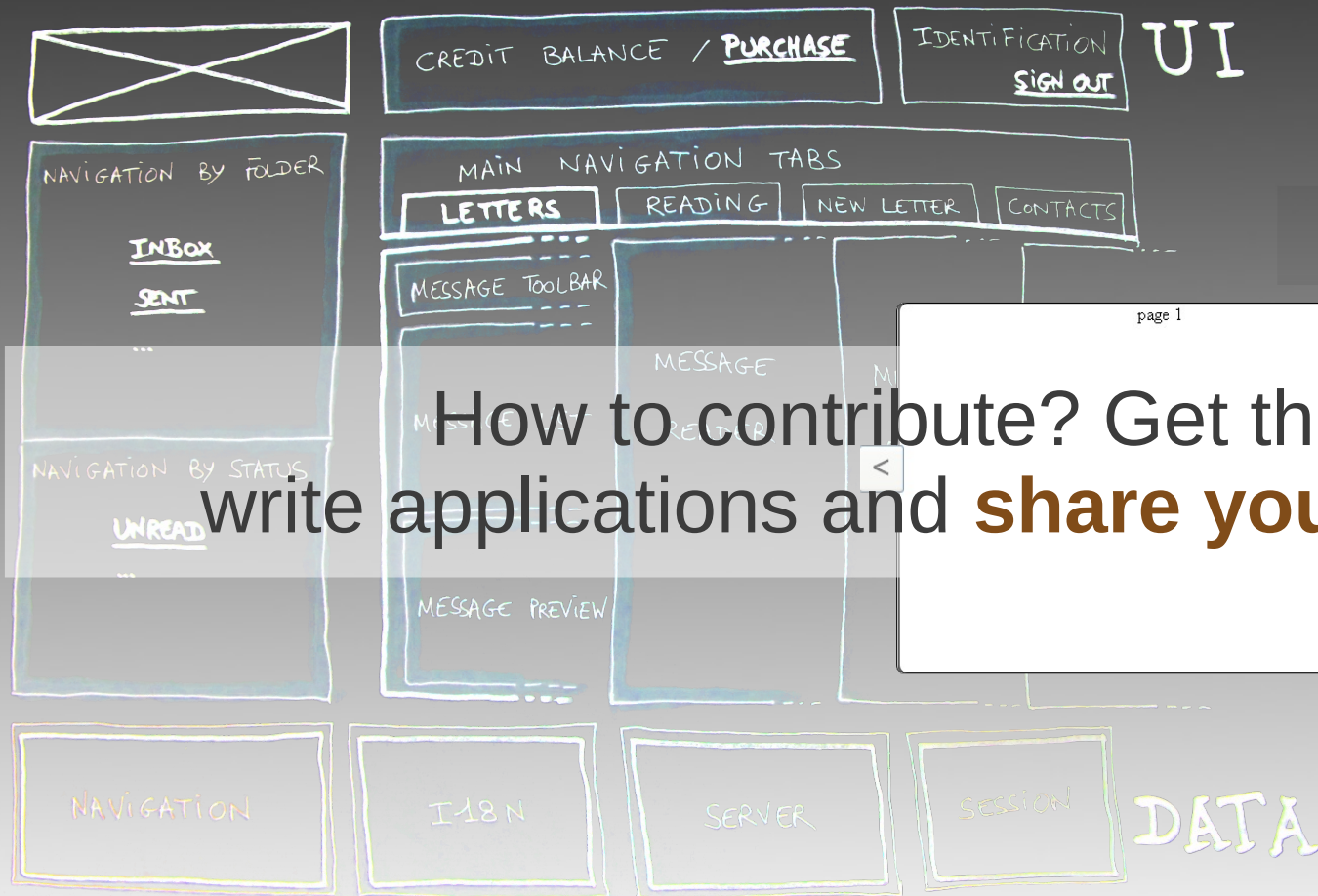
lb.ui.fileUploader.js [+] 645,1 79%
// Module Creation$
subscribe({topic: 'session', type: 'new'}, onNewSession);$
lb.ui.fileUploader.js [+] 795,42 95%
```



We need a **new state of mind** to imagine modules where we did not expect them



How to Contribute?



How to contribute? Fork the project on GitHub
and **suggest improvements**

https://github.com/legalbox/lb_js_scalableApp

Hint: JavaScript module loading

How to contribute? **Join Legal-Box.**
We're hiring!



contact@legal-box.com



THANK YOU!

References

- Scalable JavaScript Application Architecture by Nicholas C. Zakas
 - [Video](#) on Yahoo! Developer Network
 - [Slides](#) on Slideshare
- The Scalable JavaScript Application Framework by Legal-Box
 - [Home Page](#) on GitHub
 - [Code](#) on GitHub

Credits

- Slide Template

- Adapted from "[tokyo-midtown-1.otp](#)"
CC-BY-SA Chih-Hao Tsai

- Pictures

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