

STEPHEN HAY
GENERATECONF 2013

Flexbox

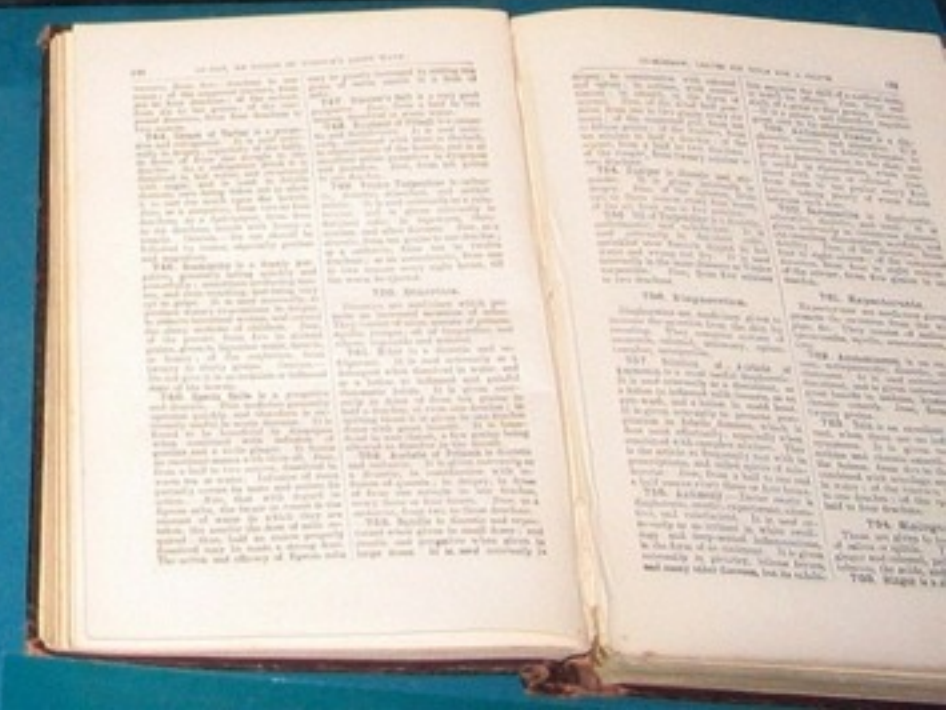
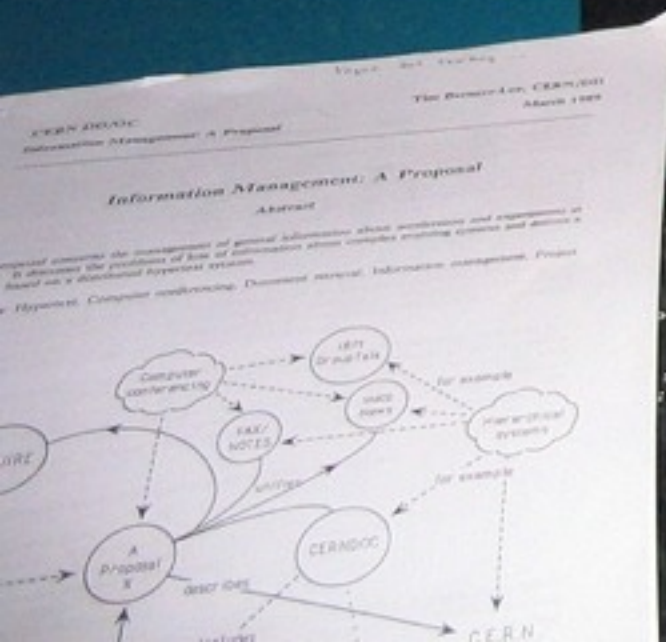
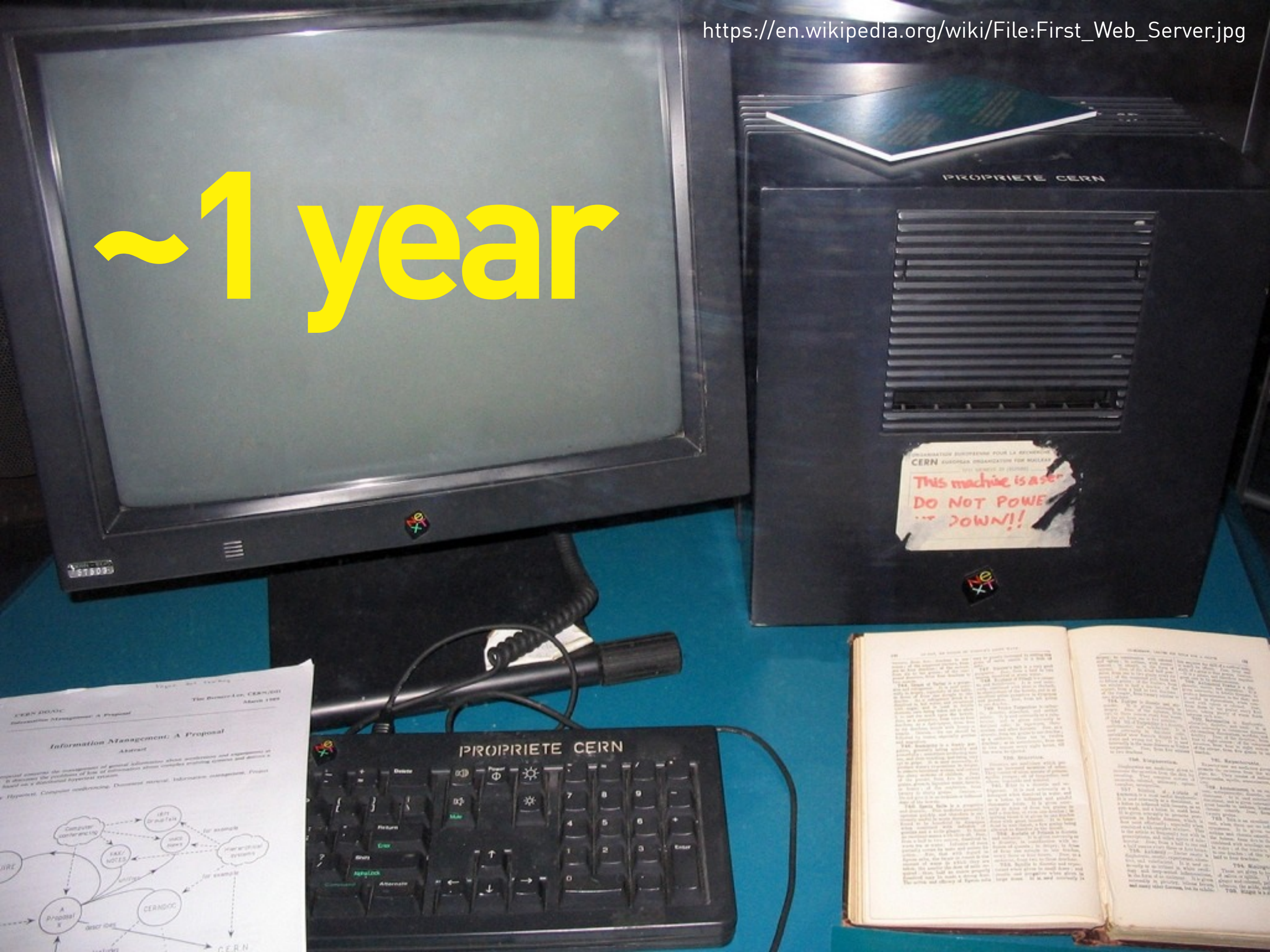
ONE GIANT LEAP FOR WEB LAYOUT





~8 years

~1 year



CASCADING STYLE SHEETS, LEVEL 1

~2 years



Cascading Style Sheets, level 1

REC-CSS1-20080411

W3C Recommendation 17 Dec 1996, revised 11 Apr 2008

This version: <http://www.w3.org/TR/2008/REC-CSS1-20080411>

Latest version: <http://www.w3.org/TR/CSS1>

Previous version: <http://www.w3.org/TR/1999/REC-CSS1-19990111>

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Note: *This paragraph is informative.* This document is currently not maintained. The CSS Working Group is developing [CSS Level 2 Revision 1](#), which has much more precise and Web-compatible definitions of the features described here. The CSS Working Group encourages authors and implementors to reference CSS 2.1 (or its [successor](#)) instead of this document and when features common to CSS1 and CSS 2.1 are defined differently to follow the definitions in CSS 2.1.

Status of this document

This document is a W3C Recommendation. It has been reviewed by W3C (<http://www.w3.org>) Members and

CSS has been around for

17 years

and only now do we have “real” layout
in the form of Flexible Box Layout Module

aka “Flexbox”

“Layout is hard.”

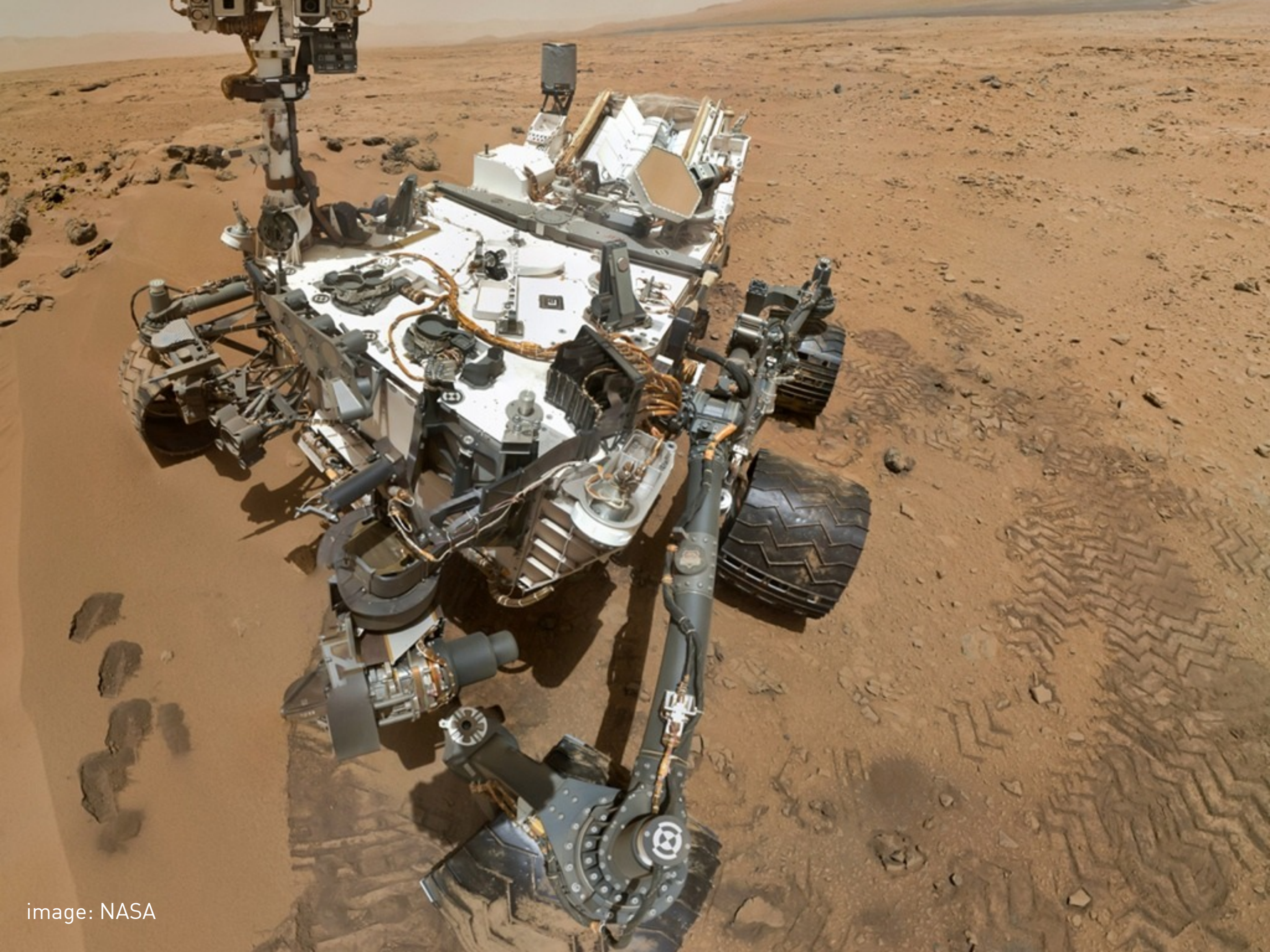


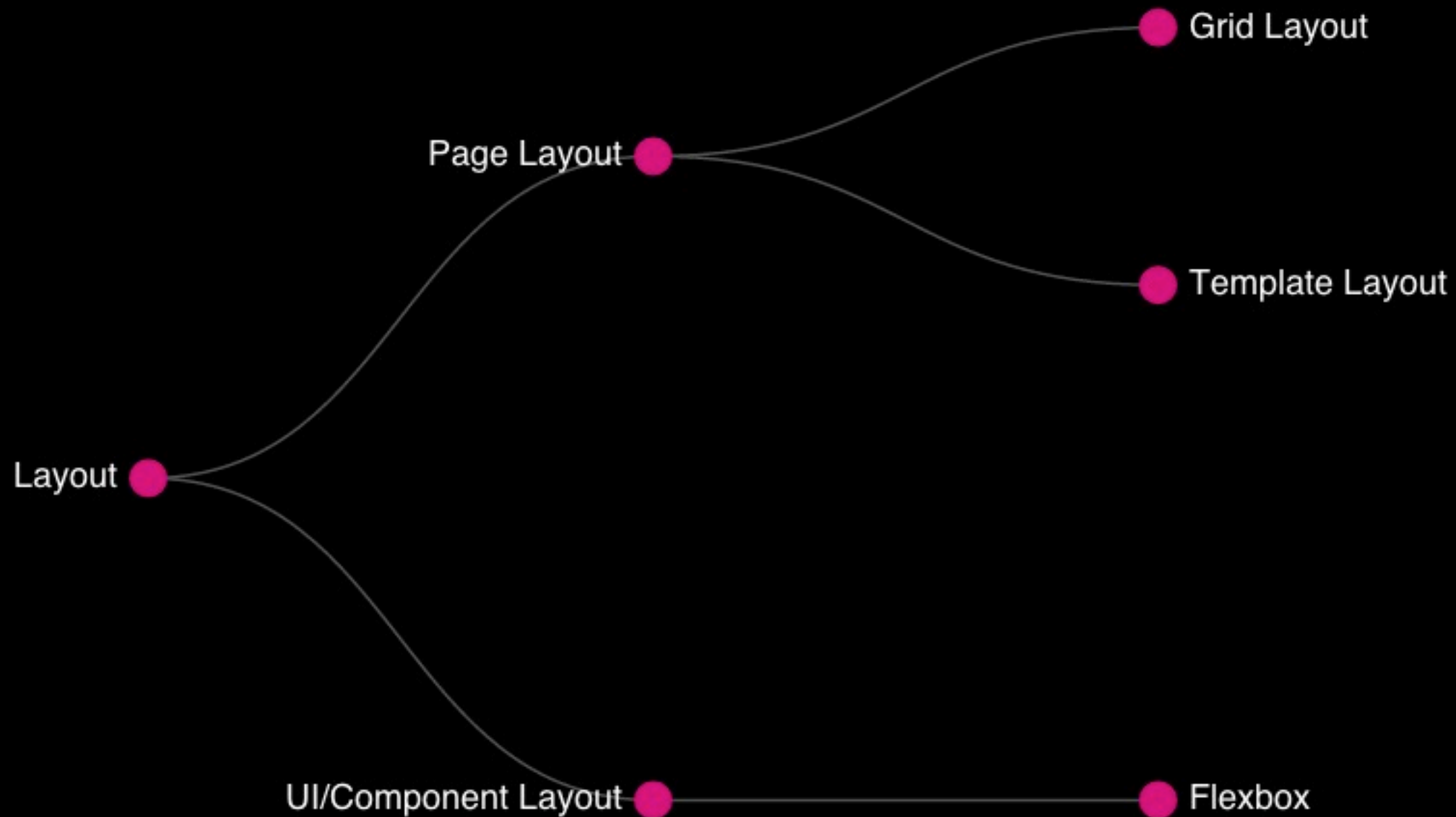
image: NASA

“Layout solutions are an interesting area in CSS to me.”

– Tab Atkins



Two major types of “real” web layout



Before you get all excited...

Flexboxes aren't ideal for page layout

<http://www.xanthir.com/blog/b4580>

A quick introduction to Flexbox

Terminology

Axes & Size

Flex

Alignment

Order

**Leave your layout baggage
at the door.**

Terminology

Flex containers

Flex items

Main axis / size / dimension

Cross axis / size / dimension

Start / end

Hi, Bob.

(Bob is a flex container)

```
#bob { display: flex; }
```


Flex items

Items in a flex container are, by default, flex items (even anonymous block boxes)



A diagram illustrating flex items. A large magenta rectangular border represents a flex container. Inside this container, three smaller yellow rectangular boxes are arranged horizontally. Each box contains text. The first box on the left says "I'm a flex item!". The middle box says "Me too!". The third box on the right says "Me three!".

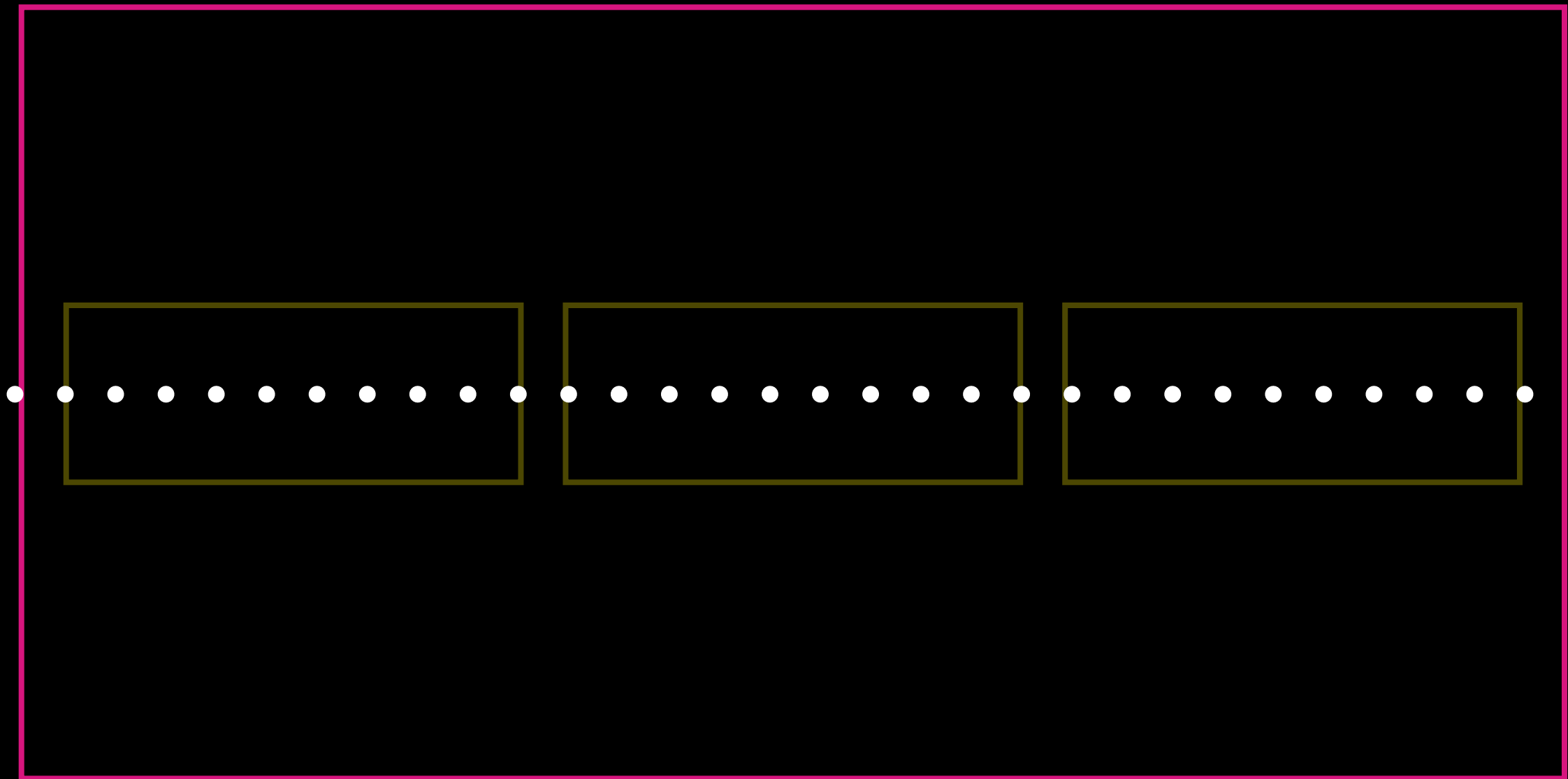
I'm a flex item!

Me too!

Me three!

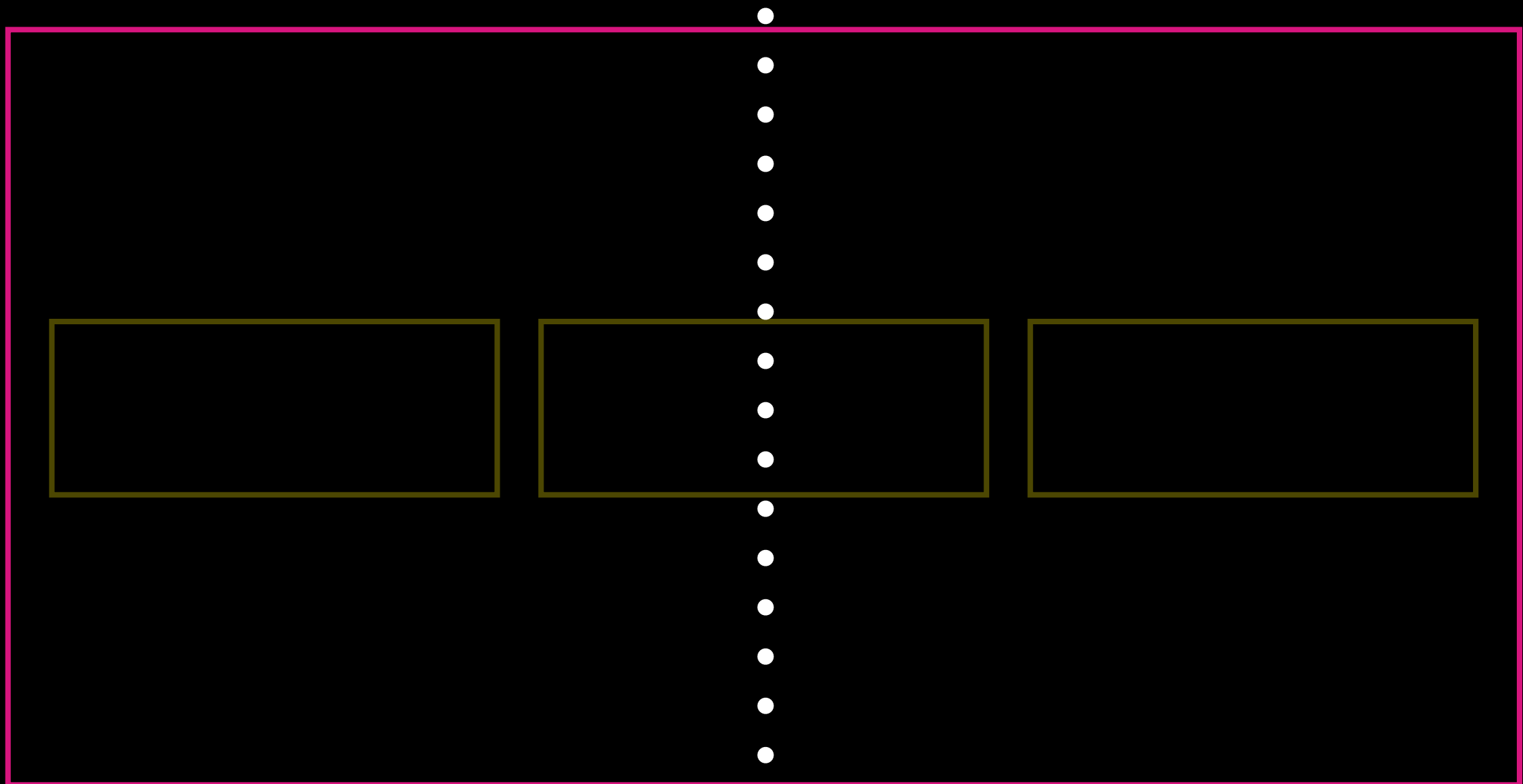
Main axis

+ main size, main dimension



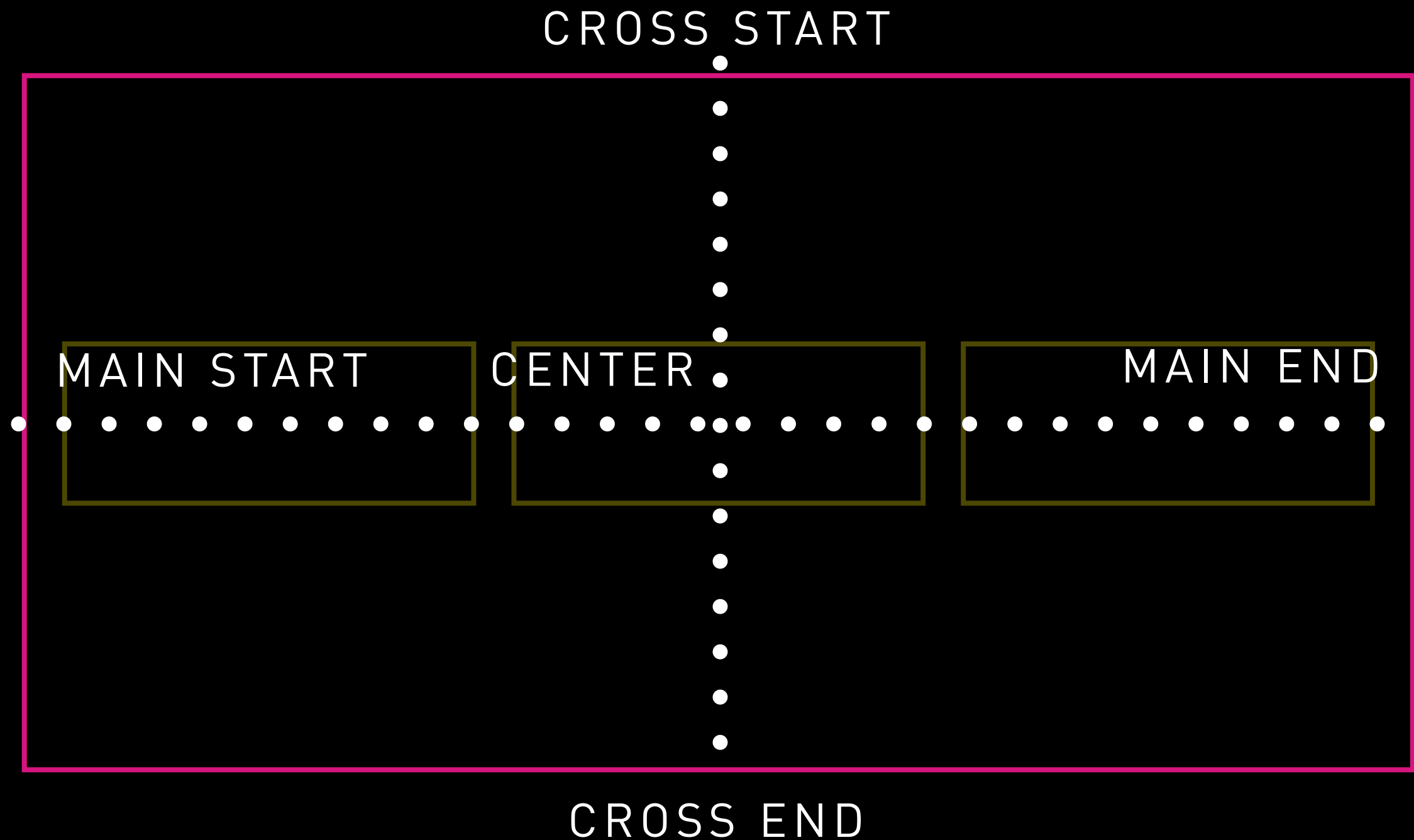
Cross axis

+ cross size, cross dimension



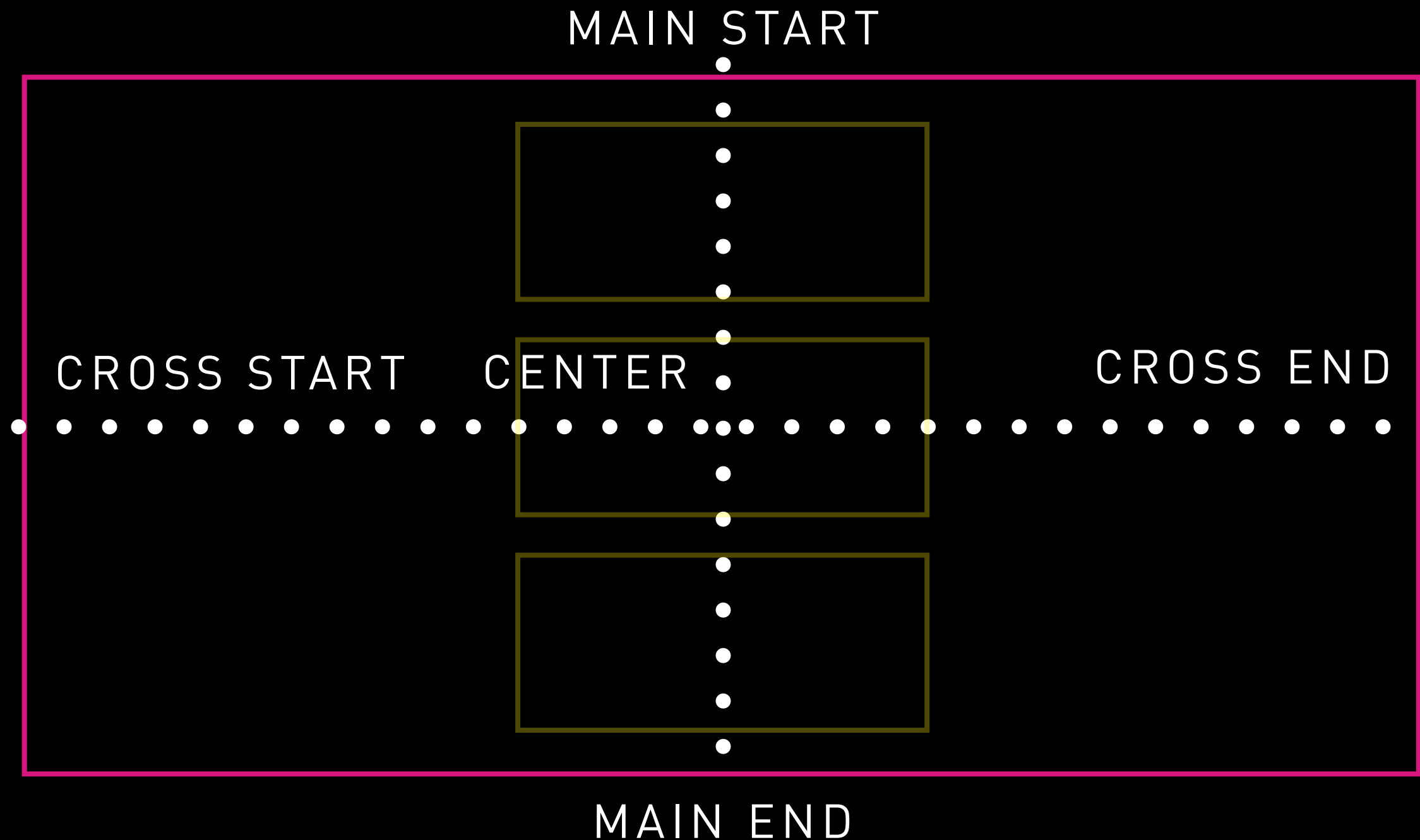
Start & End

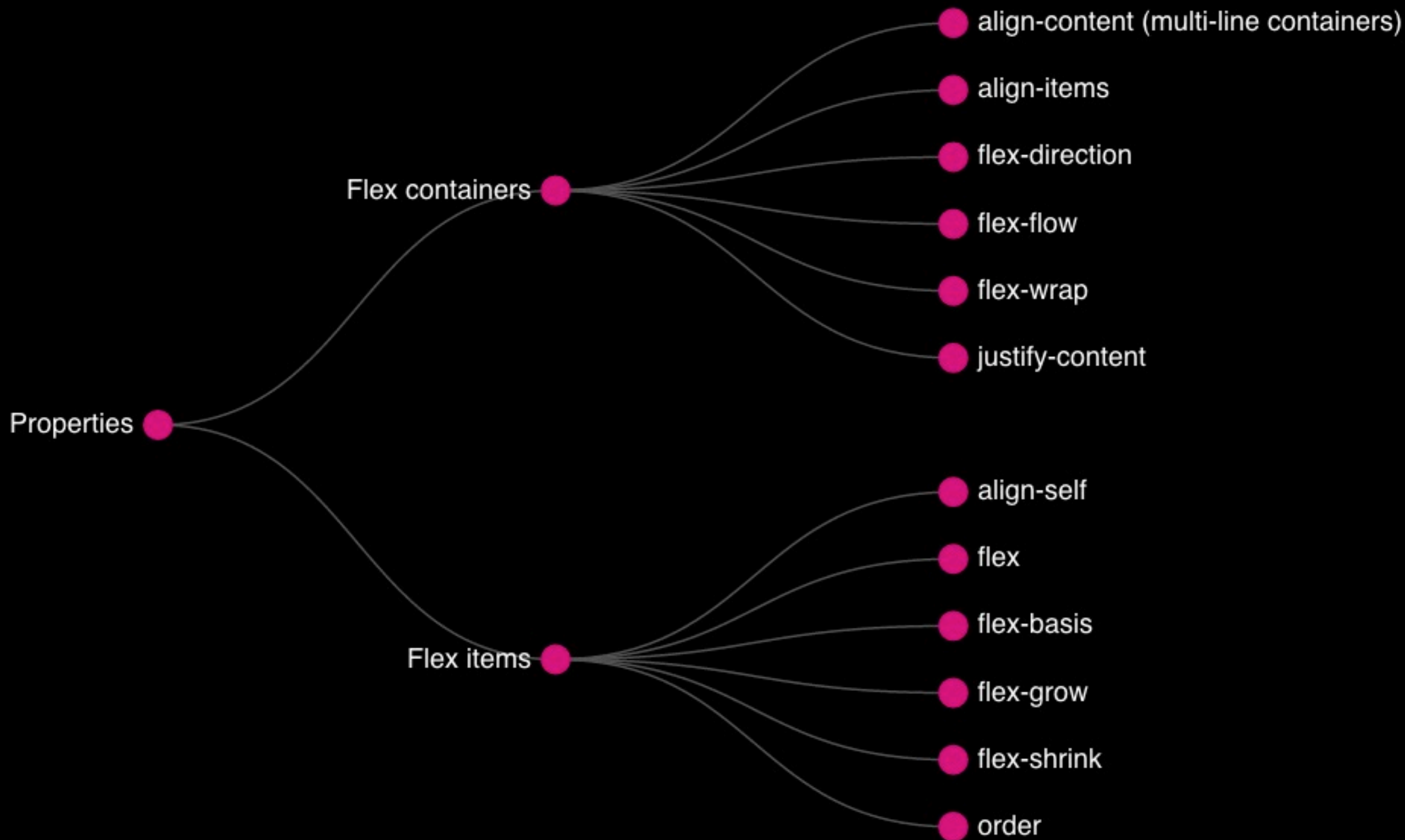
depends on direction



Start & End

depends on direction





Direction

```
#bob {  
  flex-direction: row | row-reverse |  
  column | column-reverse;  
  
  flex-wrap: no-wrap | wrap | wrap-reverse;  
}
```

SHORTHAND:

```
#bob { flex-flow: row wrap; }
```

Flex

```
.flex-item {  
  flex: flex-grow flex-shrink flex-basis;  
}
```

EXAMPLE:

```
.foo { flex: 0 1 100px; }
```

Flex common values (1)

```
.foo { flex: initial; }
```

IS EQUIVALENT TO:

```
.foo { flex: 0 1 auto; }
```

width:
150px

width:
150px

width:
150px

Flex common values (2)

```
.foo { flex: auto; }
```

IS EQUIVALENT TO:

```
.foo { flex: 1 1 auto; }
```



Flex common values (3)

```
.foo { flex: none; }
```

IS EQUIVALENT TO:

```
.foo { flex: 0 0 auto; }
```

width:
150px

width:
150px

width:
150px

Flex common values (4)

```
.foo { flex: [n]; }
```

IS EQUIVALENT TO:

```
.foo { flex: [n] 1 0%; }
```



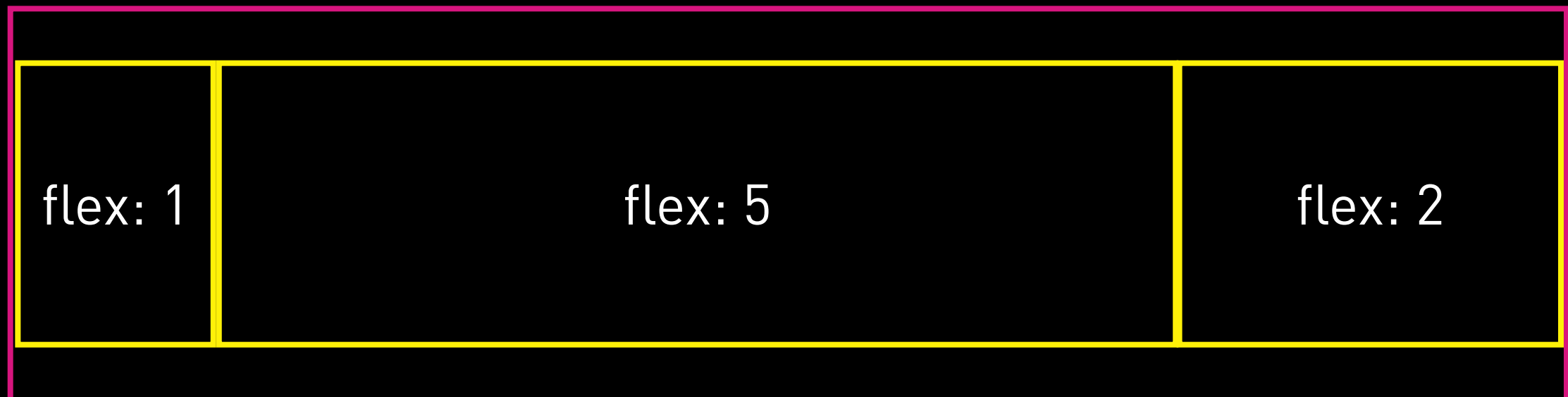
Flex flex: [n]

flex: 1

flex: 1

flex: 2

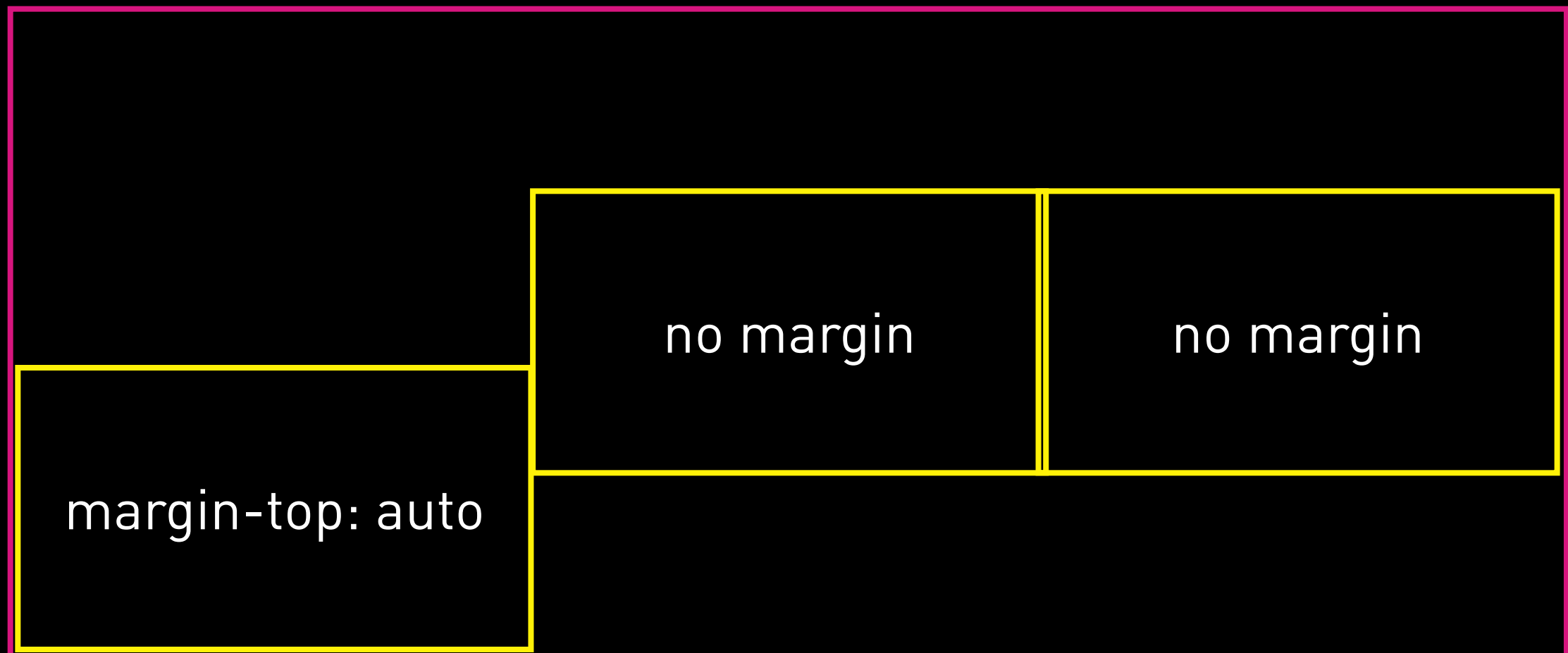
Flex flex: [n]



Alignment

auto-margins

```
.foo { margin-top: auto; }
```

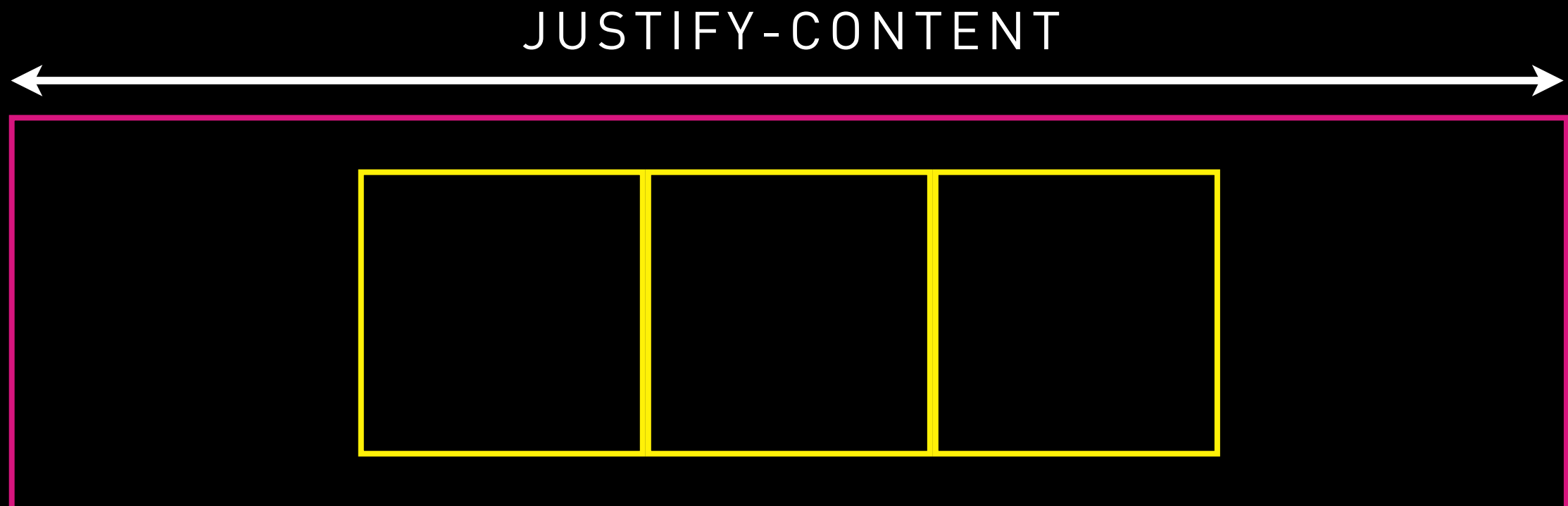


Alignment

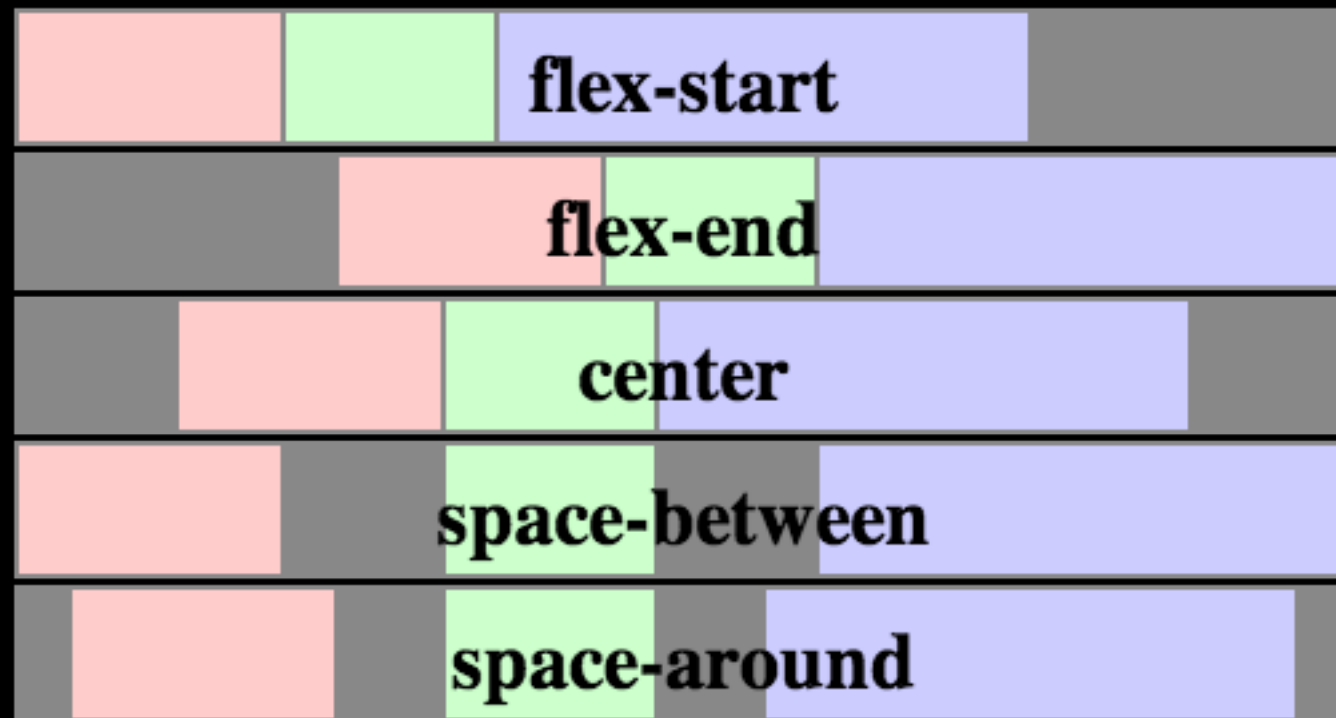
along the main axis: justify-content

(align-content for multiple lines along cross axis)

```
#bob { justify-content: flex-start |  
        flex-end | center | space-between |  
        space-around }
```



in the case of flex-direction: row

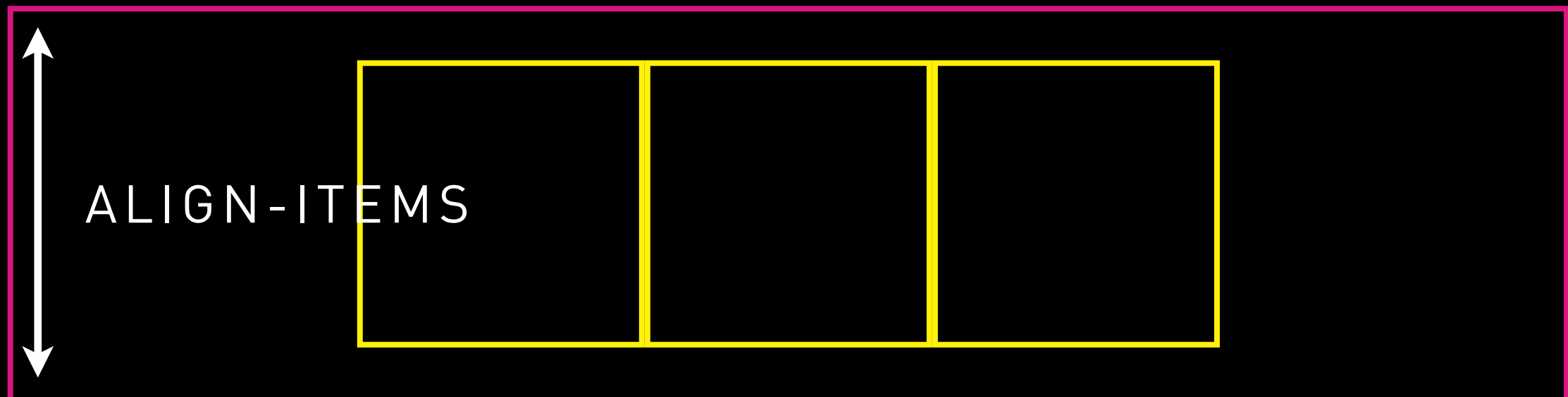


Alignment

along the cross axis: align-items

(align-self can be applied to the flex items themselves)

```
#bob { align-items: flex-start |  
        flex-end | center | baseline | stretch }
```



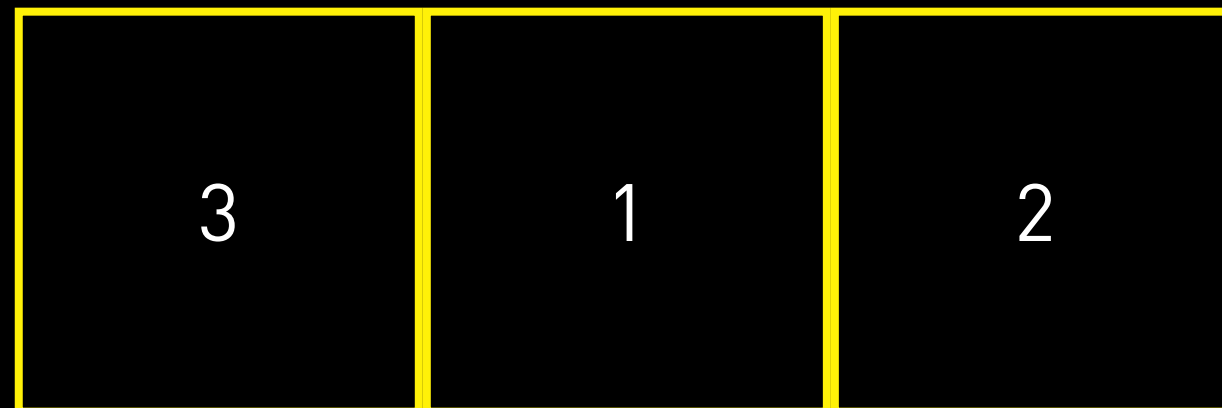
in the case of flex-direction: row

Order

changes the **visual order** vs. the source order

```
.foo { order: [n]; }
```

```
.item:nth-child(3) { order: -1; }
```



Common use cases

True centering (both axes)

Unknown menu items

Display order

Wrapping (menu items, boxes)

Tab groups

Form layout

A small example

Structured content

Thomas Table

+31 6 555 55 555

- [Call](#)
- [Delete Messages](#)

19 July 2013

09:57

So, this Flexbox stuff looks pretty great, right?

10:03

Yeah, whatever. I just wish table layout would come back.

10:09

I'm calling off the wedding.

Thomas Table

+31 6 555 55 555

- [Call](#)
- [Delete Messages](#)

19 July 2013

09:57

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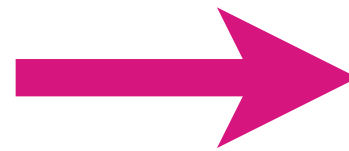
10:09

I'm calling off the wedding.

Enter message

Attach a File

Basic styles



Thomas Table

+31 6 555 55 555



19 July 2013



09:57

So, this Flexbox stuff looks pretty great, right?



10:03

Yeah, whatever. I just wish table layout would come back.



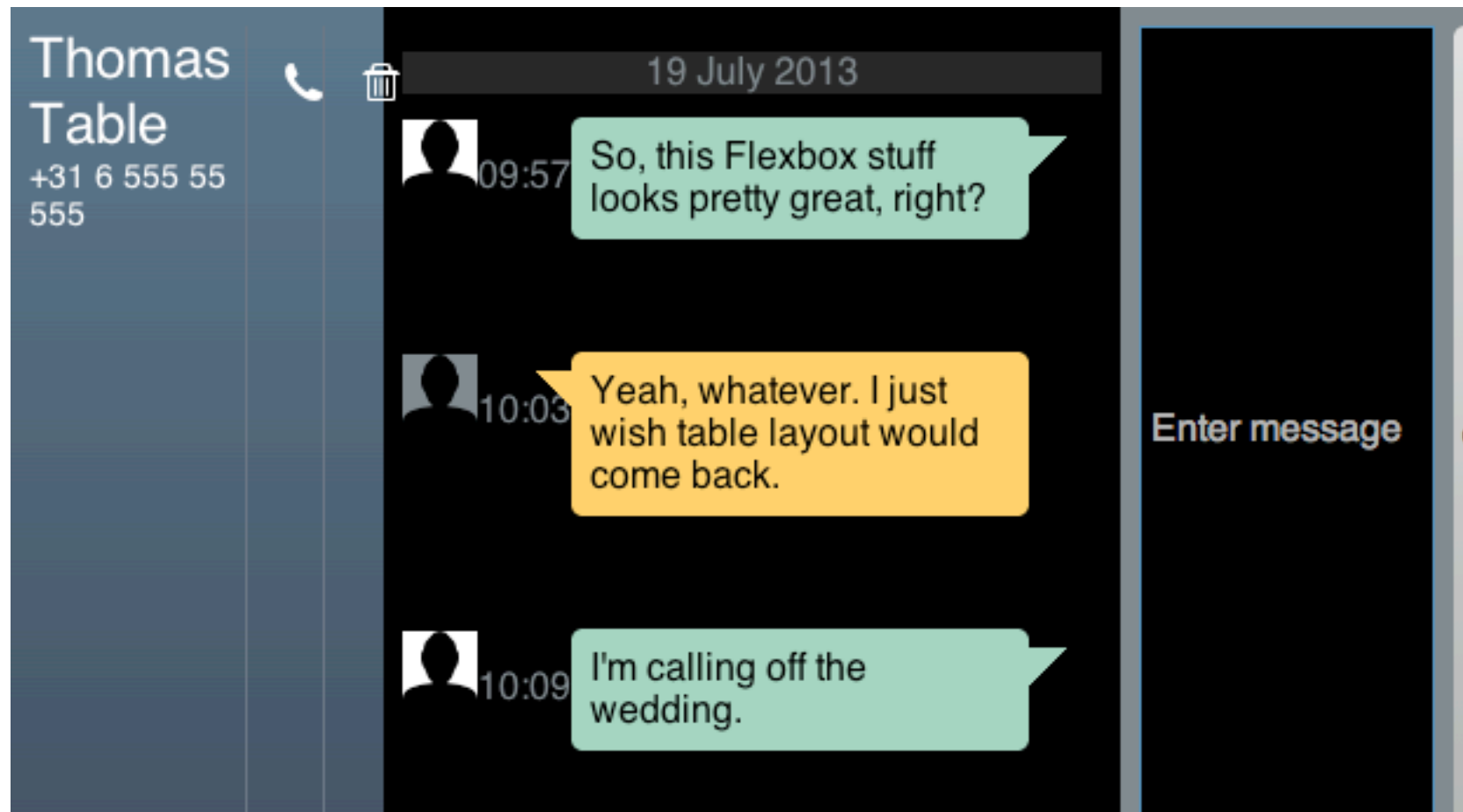
10:09

I'm calling off the wedding.

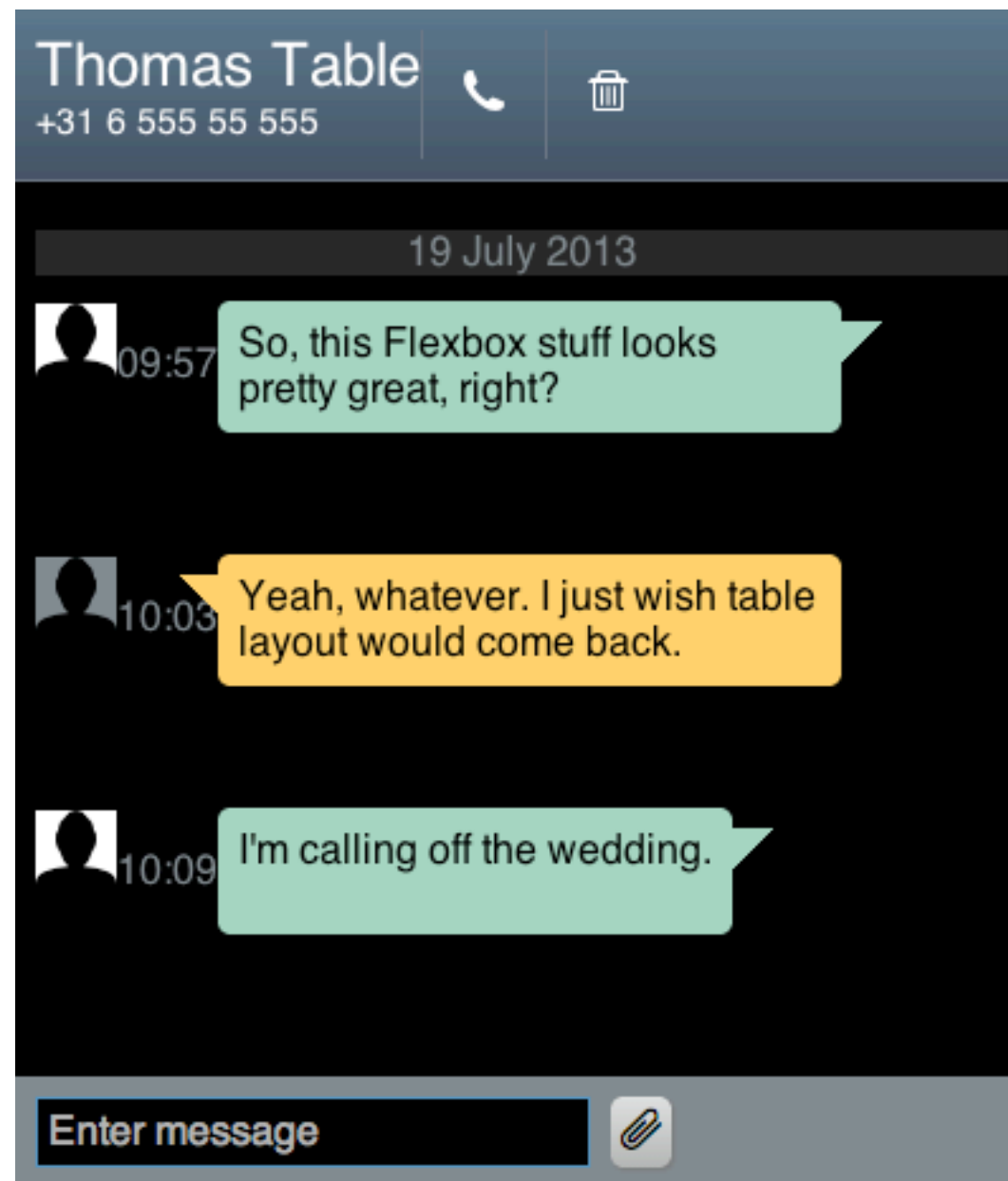
Enter message



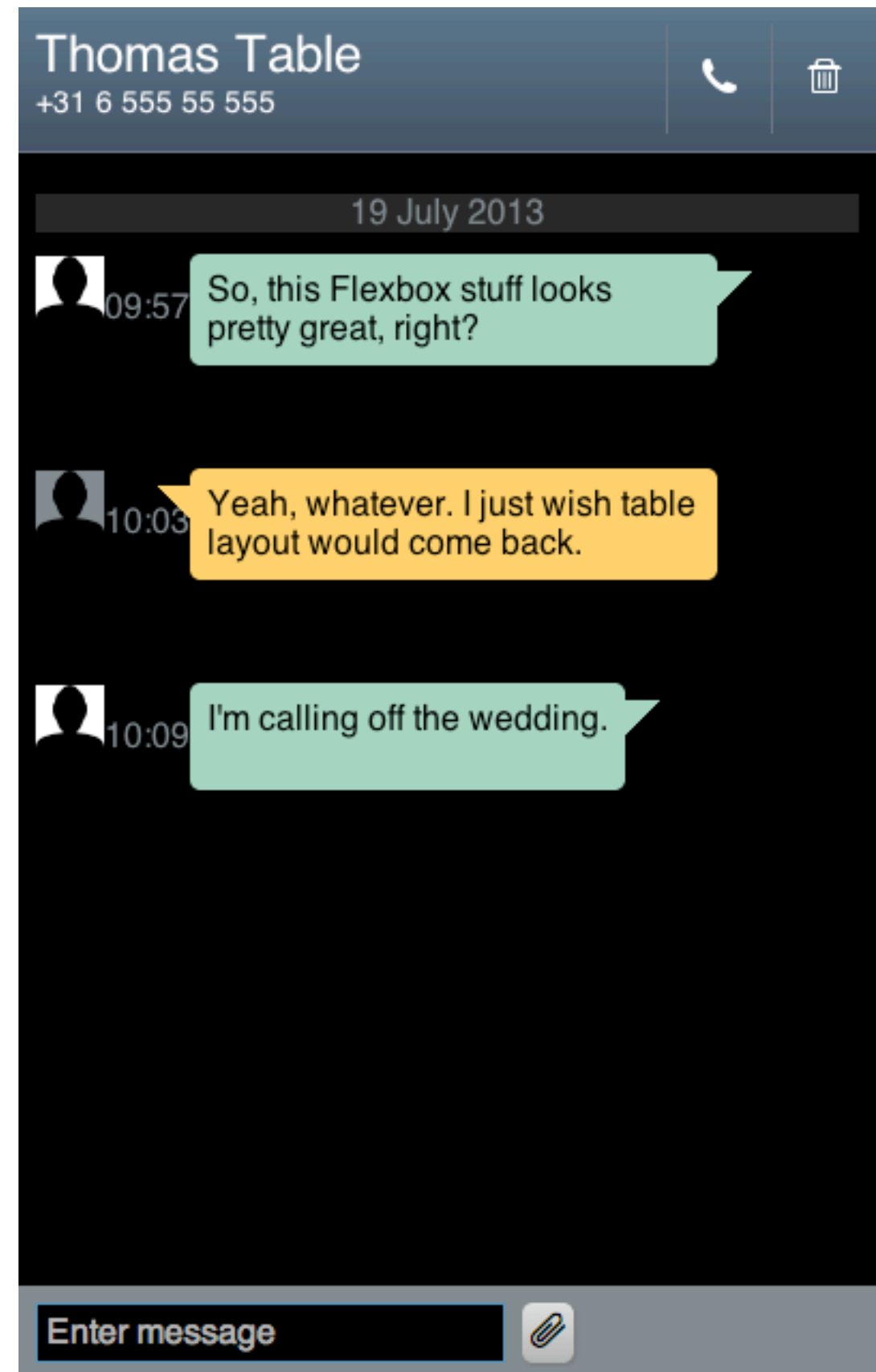
display: flex on container



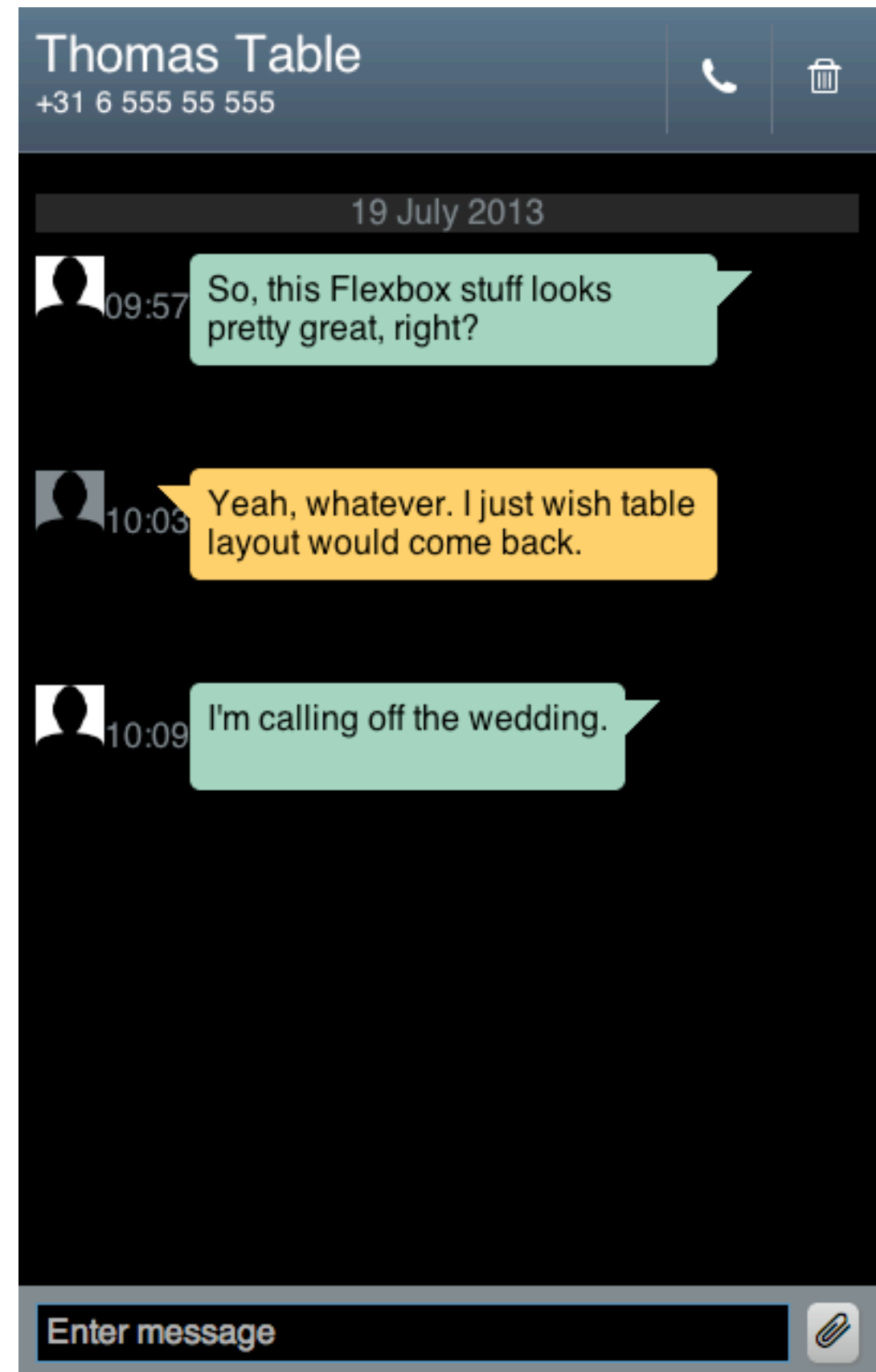
flex-direction:column



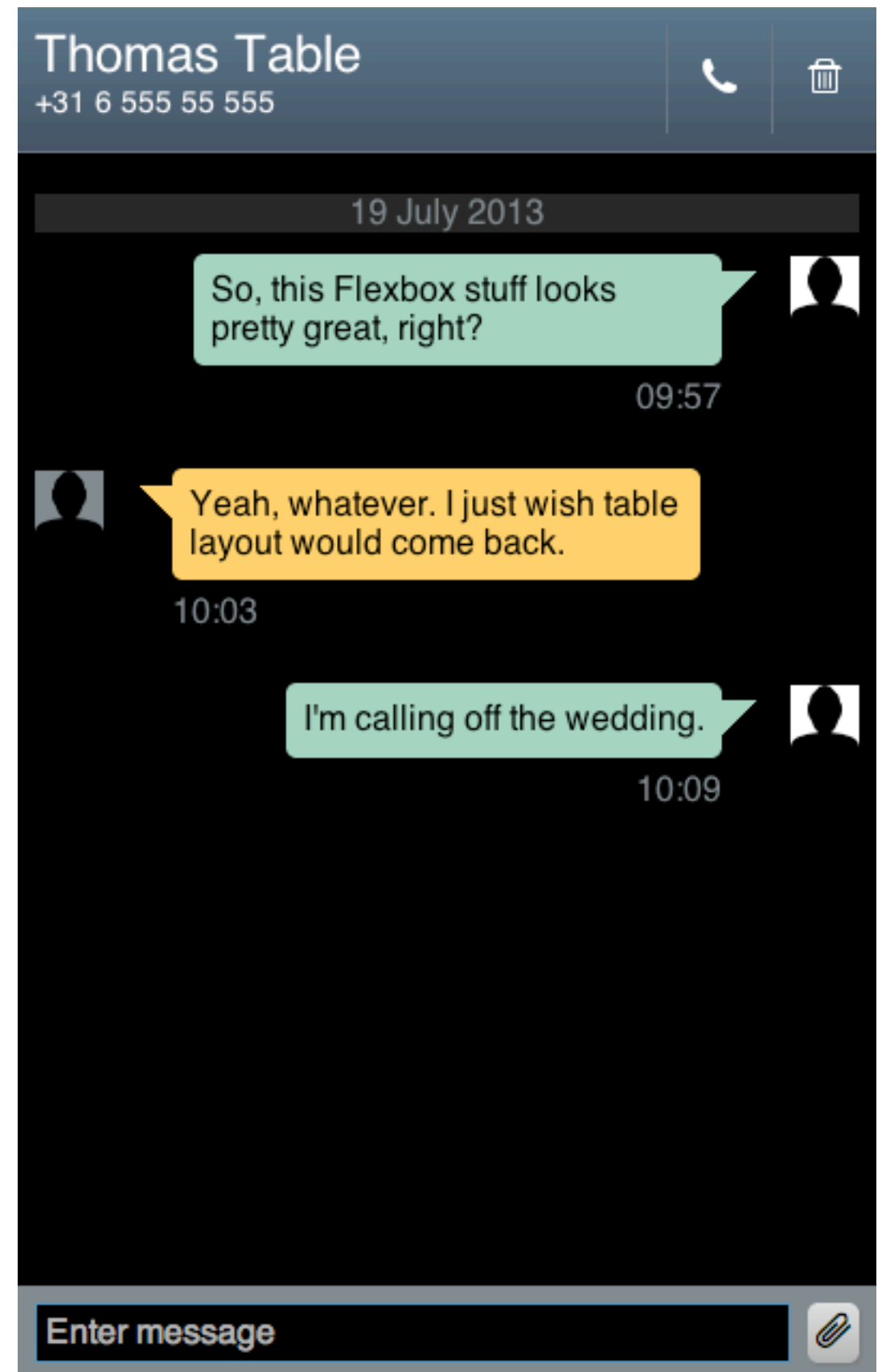
margin-auto
on icons and
form



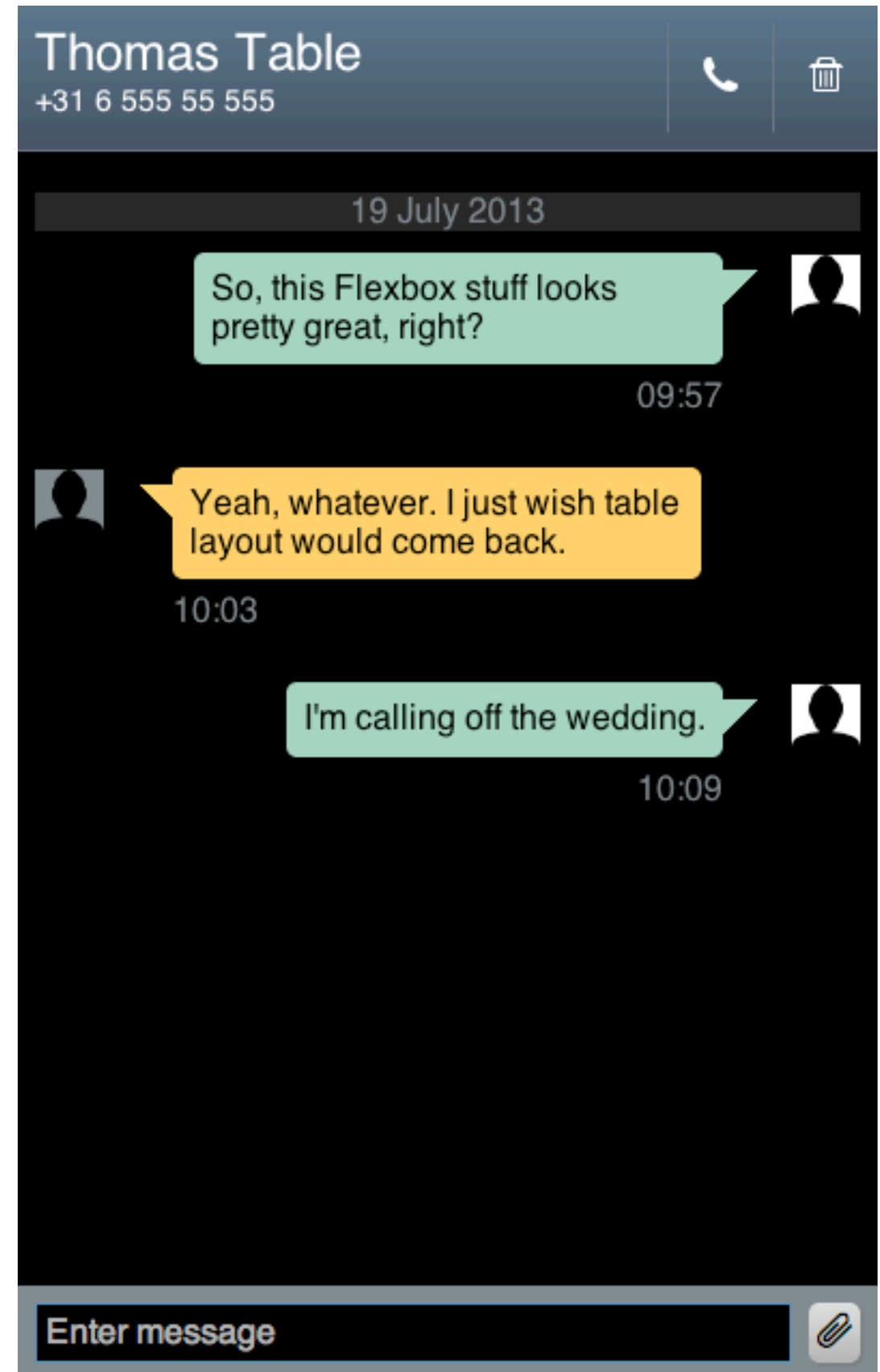
flex:1
on input field



order
for avatar display



done.



Browser compatibility

source: <http://caniuse.com/#search=flexbox>

Flexible Box Layout Module - Candidate Recommendation

Method of positioning elements in horizontal or vertical stacks.

*Usage stats:

Global

Support:	35.03%
Partial support:	44.29%
Total:	79.32%

Show all versions	IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Blackberry Browser	IE Mobile
								2.1 -webkit-		
								2.2 -webkit-		
						3.2 -webkit-		2.3 -webkit-		
						4.0-4.1 -webkit-		3.0 -webkit-		
	8.0					4.2-4.3 -webkit-		4.0 -webkit-		
	9.0	22.0	28.0 -webkit-	5.1 -webkit-		5.0-5.1 -webkit-		4.1 -webkit-	7.0 -webkit-	
Current	10.0 -ms-	23.0	29.0	6.0 -webkit-	16.0 -webkit-	6.0-6.1 -webkit-	5.0-7.0	4.2 -webkit-	10.0 -webkit-	10.0 -ms-
Near future	11.0	24.0	30.0	7.0 -webkit-	17.0 -webkit-	7.0 -webkit-				
Farther future		25.0	31.0							

Notes

Known issues (1)

Resources (4)

Feedback

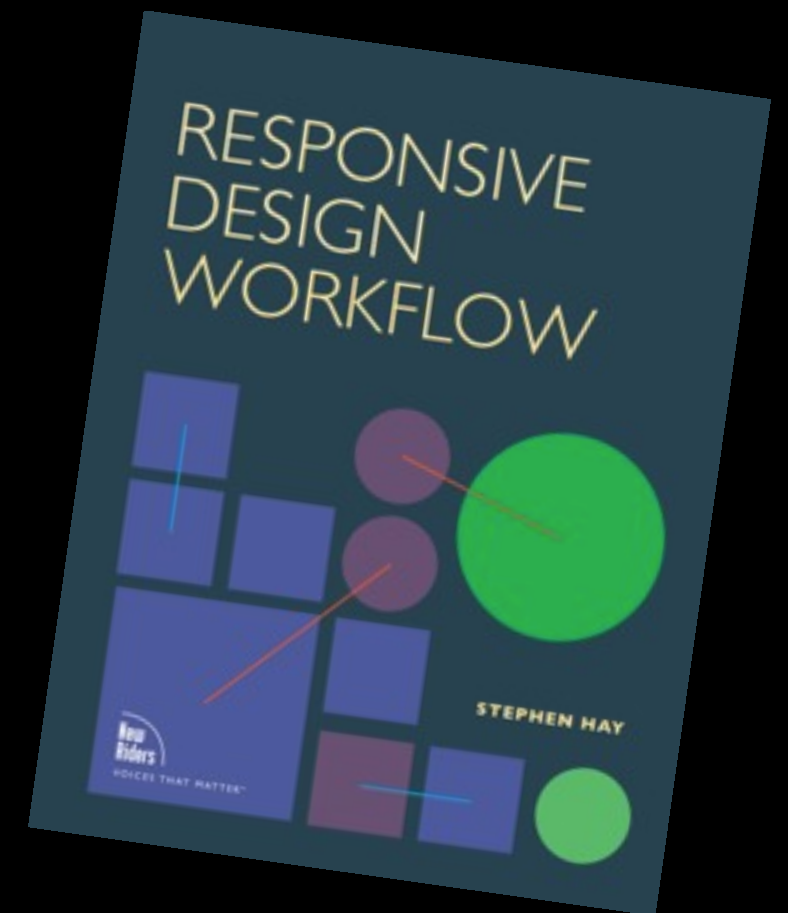
[Edit on GitHub](#)

Most partial support refers to supporting an older version of the specification or an older syntax. For Firefox 21+ it refers to lack of flex-wrap & flex-flow support.

have **fun**

keep **learning**

THANK YOU!



@stephenhay