

# Deck



a Go package for presentations

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## DECK: a package for presentations

Deck is a package written in Go

That uses a singular markup language

With elements for text, lists, code, and graphics

All layout and sizes are expressed as percentages

Clients are interactive or create formats like PDF or SVG

Elements

Hello, World

A block of text, word-wrapped to a specified width. You may specify size, font, color, and opacity.

```
package main

import "fmt"

func main() {
    fmt.Println("Hello, World")
}
```

<text>...</text>

bullet

- Point A
- Point B
- Point C
- Point D

plain

First item

Second item

The third item

the last thing

number

1. This

2. That

3. The other

4. One more

```
<list>...</list>
```

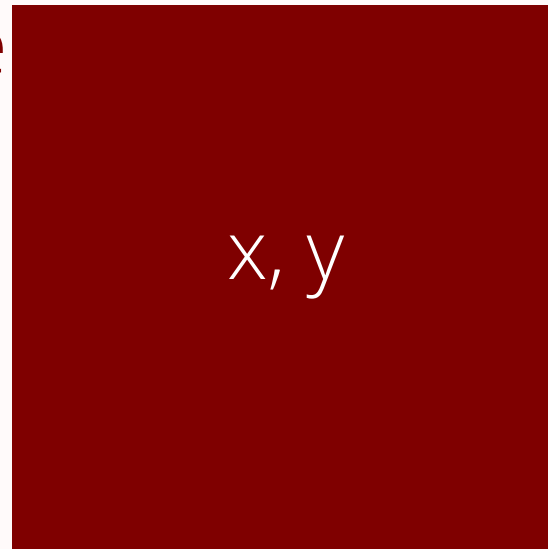
height



width

```
<image .../>
```

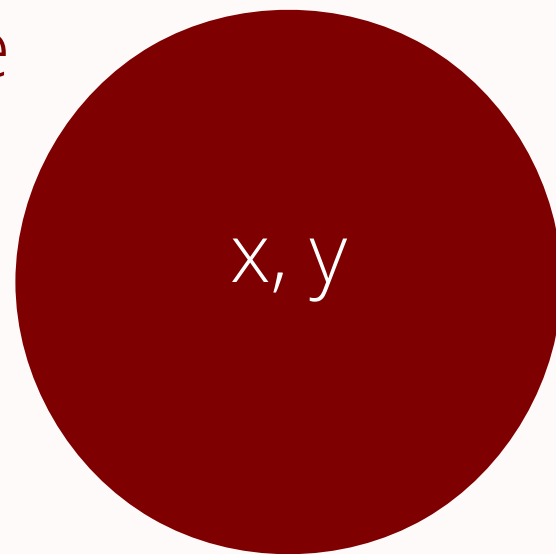
height (relative  
to element  
or canvas  
width)



width

```
<rect ... />
```

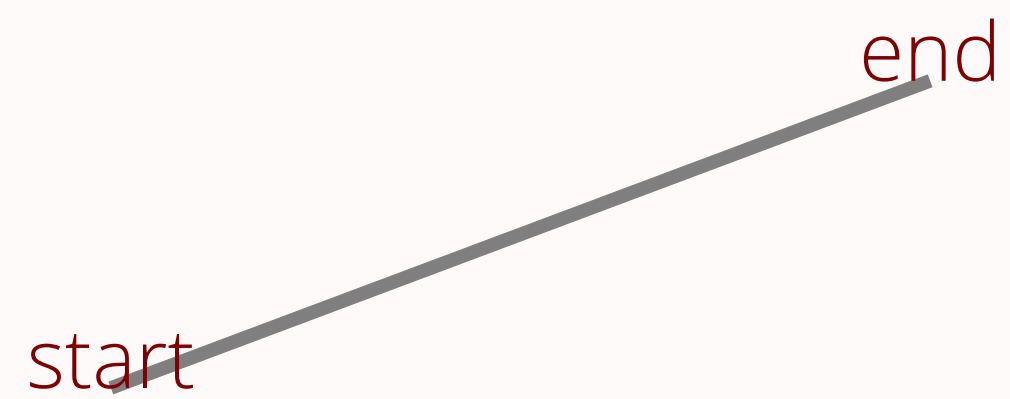
height (relative  
to element  
or canvas  
width)



width

```
<ellipse .../>
```





```
<line .../>
```

angle2 (90 deg)

x, y    angle1 (0 deg)

<arc ... />



<curve .../>

Markup and Layout

Start the deck  
Set the canvas size  
Begin a slide  
Place an image  
Draw some text  
Make a bullet list  
  
End the list  
Draw a line  
Draw a rectangle  
Draw an ellipse  
Draw an arc  
Draw a quadratic bezier  
End the slide  
End of the deck

```
<deck>  
  <canvas width="1024" height="768" />  
  <slide bg="white" fg="black">  
    <image xp="70" yp="60" width="256" height="179" name="work.png" caption="Desk"/>  
    <text xp="20" yp="80" sp="3">Deck uses these elements</text>  
    <list xp="20" yp="70" sp="2" type="bullet">  
      <li>text, list, image</li>  
      <li>line, rect, ellipse</li>  
      <li>arc, curve</li>  
    </list>  
    <line xp1="20" yp1="10" xp2="30" yp2="10"/>  
    <rect xp="35" yp="10" wp="4" hr="75" color="rgb(127,0,0)"/>  
    <ellipse xp="45" yp="10" wp="4" hr="75" color="rgb(0,127,0)"/>  
    <arc xp="55" yp="10" wp="4" hp="3" a1="0" a2="180" color="rgb(0,0,127)"/>  
    <curve xp1="60" yp1="10" xp2="75" yp2="20" xp3="70" yp3="10" />  
  </slide>  
</deck>
```

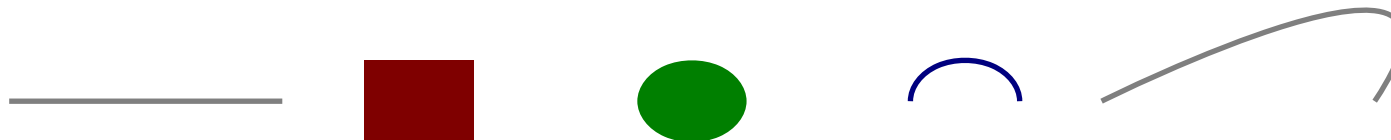
## Anatomy of a Deck

# Deck uses these elements

- text, list, image
- line, rect, ellipse
- arc, curve



Desk



# Text and List Markup

Position, size      <text xp="..." yp="..." sp="...">

Block of text      <text ... type="block">

Lines of code      <text ... type="code">

Attributes      <text ... color="..." opacity="..." font="..." align="...">

Position, size      <list xp="..." yp="..." sp="...">

Bullet list      <list ... type="bullet">

Numbered list      <list ... type="number">

Attributes      <list ... color="..." opacity="..." font="..." align="...">

# Common Attributes for text and list

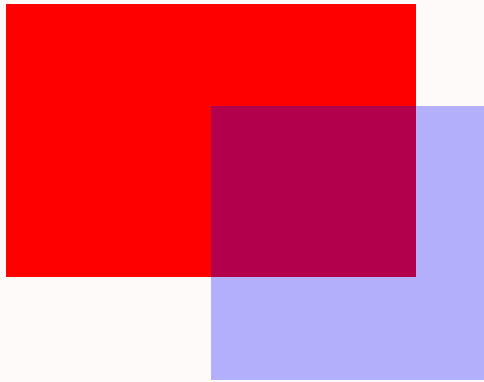
<b>xp</b>	horizontal percentage
<b>yp</b>	vertical percentage
<b>sp</b>	font size percentage
<b>type</b>	"bullet", "number" (list), "block", "code" (text)
<b>align</b>	"left", "middle", "end"
<b>color</b>	SVG names ("maroon"), or RGB "rgb(127,0,0)"
<b>opacity</b>	percent opacity (0-100, transparent - opaque)
<b>font</b>	"sans", "serif", "mono"



# Graphics Markup

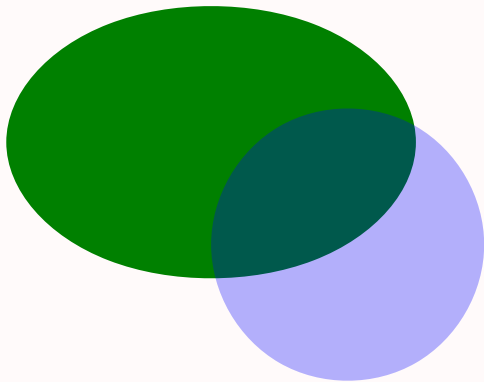


```
<line xp1="5" yp1="75" xp2="20" yp2="70" sp="0.2"/>
```



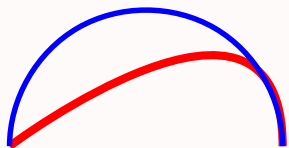
```
<rect xp="10" yp="60" wp="15" hr="66.6" color="red"/>
```

```
<rect xp="15" yp="55" wp="10" hr="100" color="blue" opacity="30"/>
```



```
<ellipse xp="10" yp="35" wp="15" hr="66.66" color="green"/>
```

```
<ellipse xp="15" yp="30" wp="10" hr="100" color="blue" opacity="30"/>
```



```
<curve xp1="5" yp1="10" xp2="15" yp2="20" xp3="15" yp3="10" sp="0.3" color="red"/>
```

```
<arc xp="22" yp="10" wp="10" wp="10" a1="0" a2="180" sp="0.2" color="blue"/>
```

	10	20	30	40	50	60	70	80	90
90									
80									
70									
60									
50									
40									
30									
20									
10									

Percent Grid

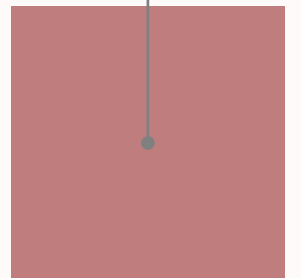
10%, 50%

Hello

50%, 50%



90%, 50%



Percentage-based layout

bullet

- Point A
- Point B
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plain

First item

Second item

The third item

the last thing

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```
<list>...</list>
```

bullet

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```
<list>...</list>
```

Design Examples



hello, world

Top

Left

Right

Bottom



20%

30%

70%

20%

Header (top 20%)

Summary  
(30%)

Detail  
(70%)

Footer (bottom 20%)

# Two Columns

One

Two

Three

Four



Tree and Sky

Five

Six

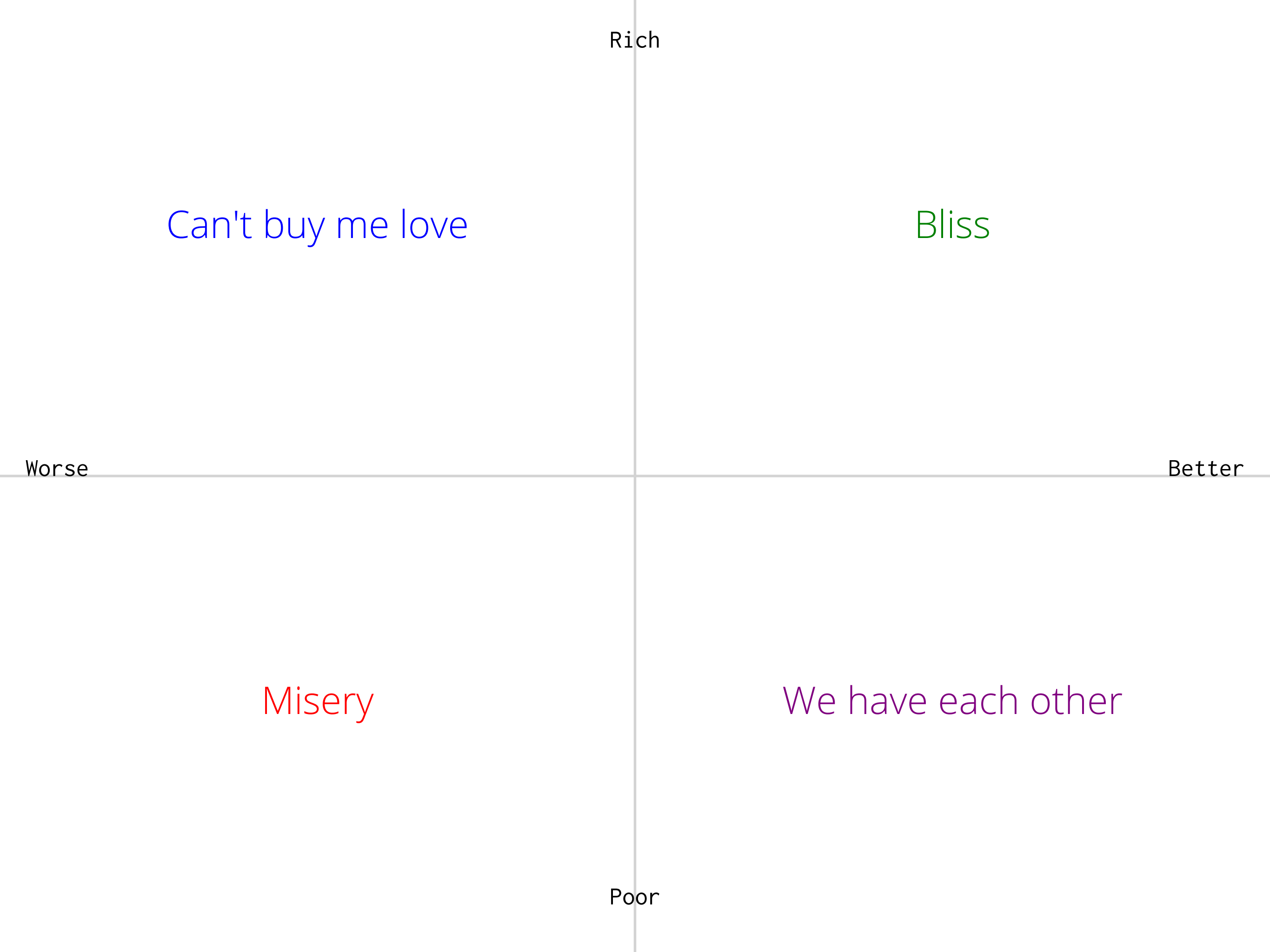
Seven

Eight



Rocks

This is not a notecard



Rich

Can't buy me love

Bliss

Worse

Better

Misery

We have each other

Poor

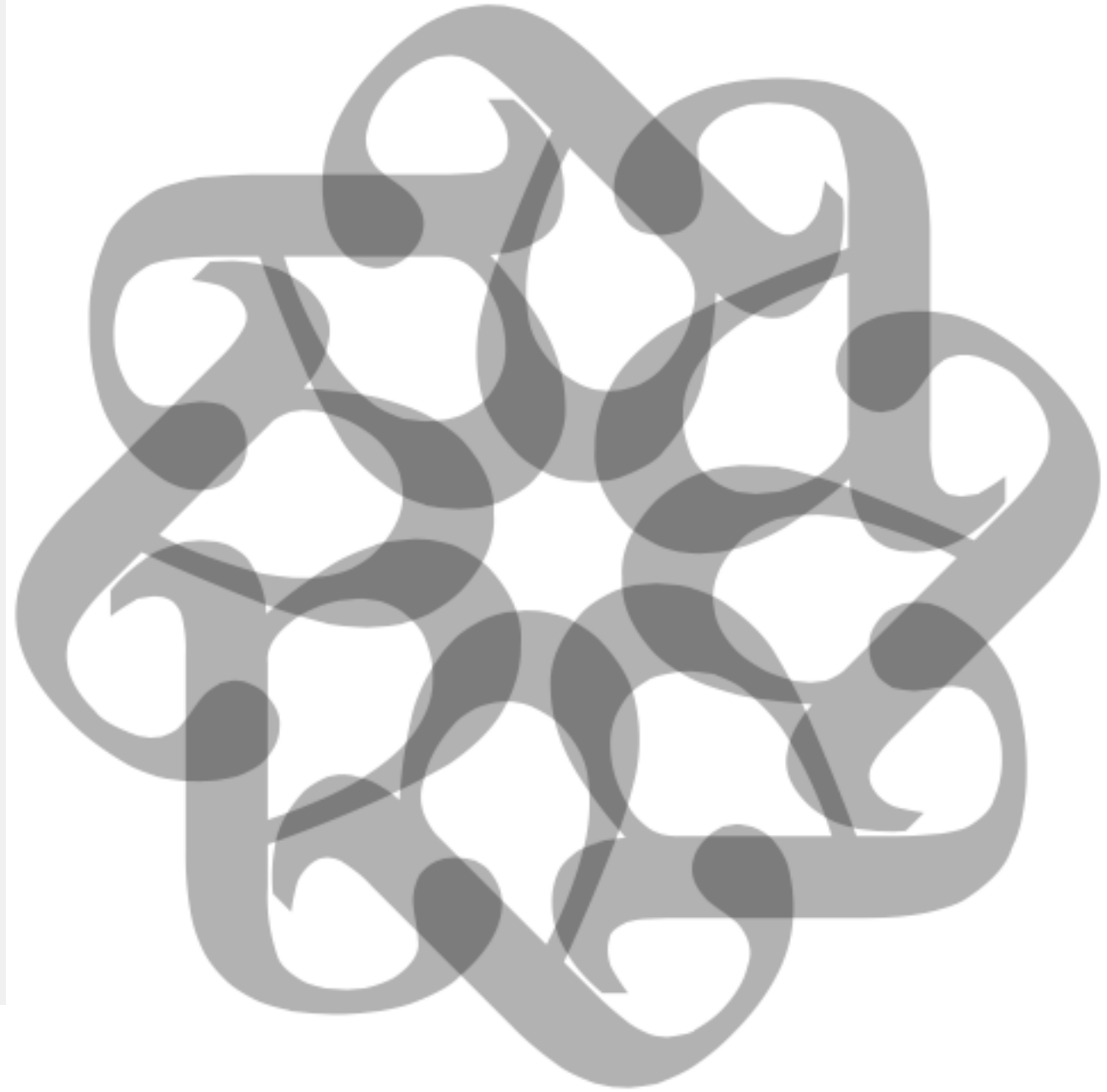
## Code

```
package main

import (
    "os"
    "github.com/ajstarks/svggo"
)

func main() {
    canvas := svg.New(os.Stdout)
    width := 850
    height := 1100
    canvas.Start(width, height)
    canvas.Gstyle("fill-opacity:0.3;font-size:480pt")
    for r := 0.0; r < 360.0; r += 45 {
        canvas.TranslateRotate(width/2, height/2, r)
        canvas.Text(0, 0, "a")
        canvas.Gend()
    }
    canvas.Gend()
    canvas.End()
}
```

## Output



A few months ago, I had a look at the brainchild of a few serious heavyweights working at Google. Their project, the Go programming language, is a static typed, c lookalike, semicolon-less, self formatting, package managed, object oriented, easily paralellizable, cluster fuck of genius with an unique class inheritance system. It doesn't have one.

# The Go Programming Language

is a static typed,  
c lookalike,  
semicolon-less,  
self formatting,  
package managed,  
object oriented,  
easily paralellizable,  
cluster fuck of genius  
with an unique class inheritance system.



# The Go Programming Language

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---

# The Go Programming Language

is a static typed, c lookalike, semicolon-less, self formatting,  
package managed, object oriented, easily paralellizable,  
cluster fuck of genius with an unique class inheritance system.

It doesn't have one.

So, the next time you're about  
to make a subclass, think hard  
and ask yourself

what would Go do

Andrew Mackenzie-Ross, <http://pocket.co/sSc56>



A full-page background image of a sky filled with large, dark, billowing clouds. A bright, glowing light source, likely the sun, is positioned behind a cloud in the upper center, creating a strong backlight effect and illuminating the edges of the clouds. The sky transitions from a deep blue at the top to a lighter blue near the horizon.

You must not blame me if I do talk to the clouds.

FOR, LO,

the winter is past,

the rain is over and gone;

The flowers appear on the earth;

the time for the singing of birds is come,

and the voice of the turtle is heard in our land.





Clients

```
package main

import (
    "log"
    "github.com/ajstarks/deck"
)

func main() {
    presentation, err := deck.Read("deck.xml", 1024, 768) // open the deck
    if err != nil {
        log.Fatal(err)
    }
    for _, slide := range presentation.Slide {           // for every slide...
        for _, t := range slide.Text {                  // process the text elements
            x, y, size := deck.Dimen(presentation.Canvas, t.Xp, t.Yp, t.Sp)
            slideText(x, y, size, t)
        }
        for _, l := range slide.List {                  // process the list elements
            x, y, size := deck.Dimen(presentation.Canvas, l.Xp, l.Yp, l.Sp)
            slideList(x, y, size, l)
        }
    }
}
```

A Deck Client

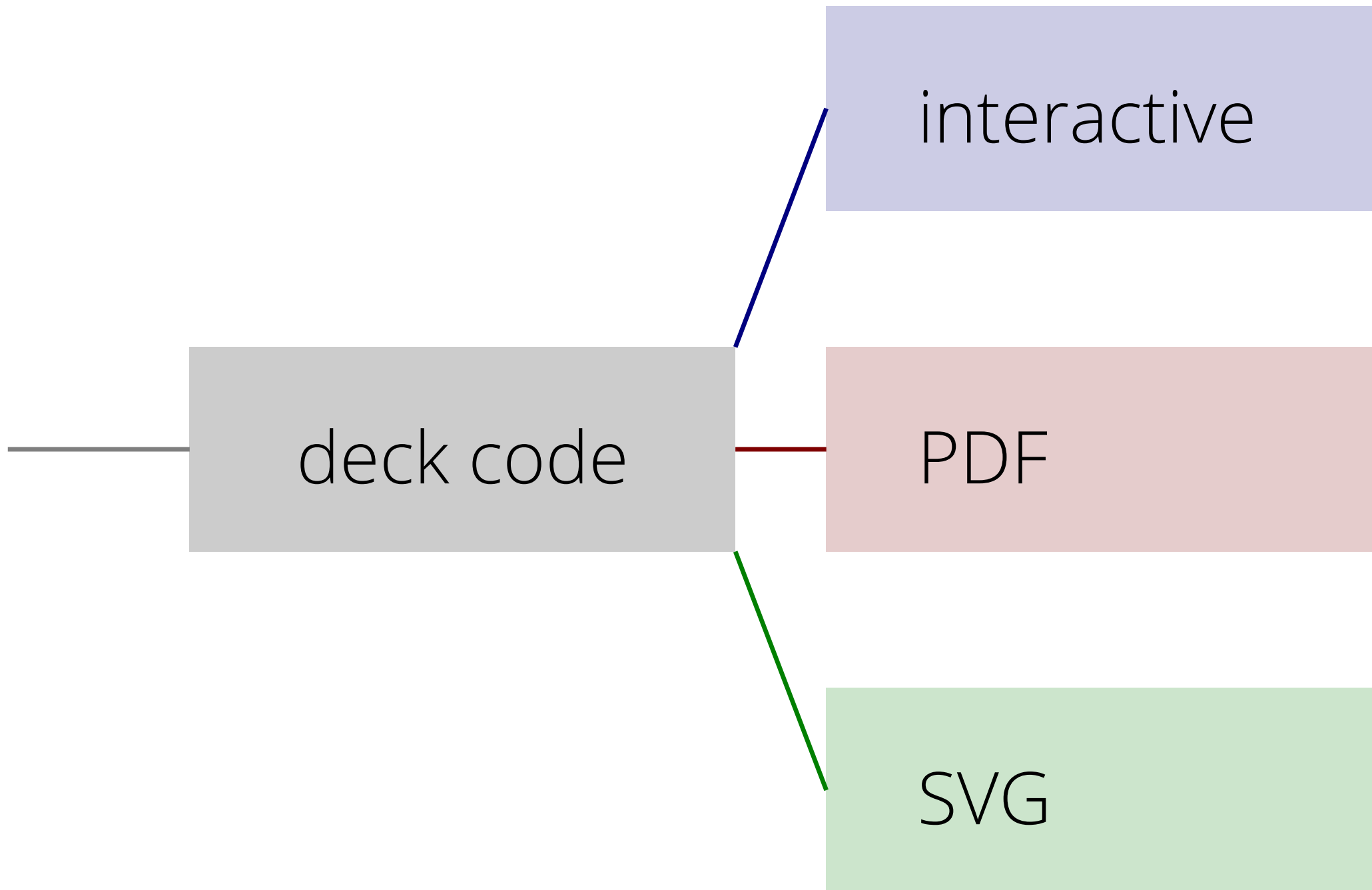
Process

deck code

interactive

PDF

SVG





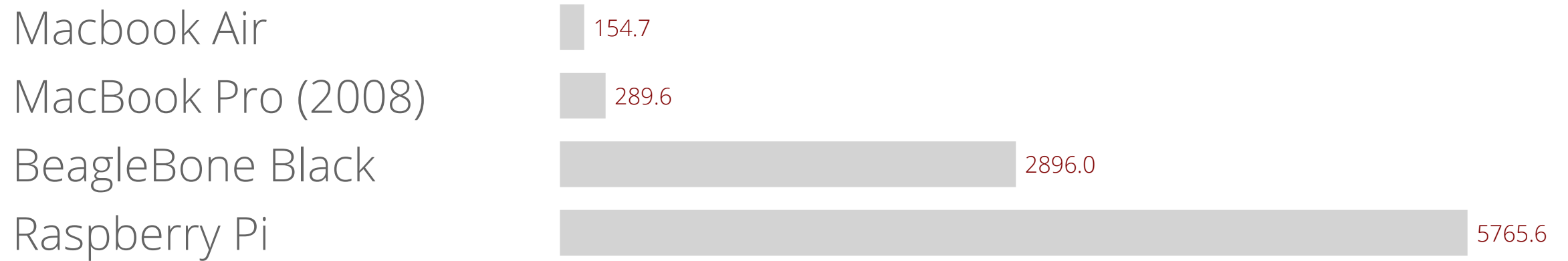
```

func main() {
    benchmarks := []Bardata{
        {"Macbook Air", 154.701},
        {"MacBook Pro (2008)", 289.603},
        {"BeagleBone Black", 2896.037},
        {"Raspberry Pi", 5765.568},
    }
    ts := 2.5
    hts := ts / 2
    x := 10.0
    bx1 := x + (ts * 12)
    bx2 := bx1 + 50.0
    y := 60.0
    maxdata := 5800.0
    linespacing := ts * 2.0
    text(x, y+20, "Go 1.1.2 Build and Test Times", ts*2, "black")
    for _, data := range benchmarks {
        text(x, y, data.label, ts, "rgb(100,100,100)")
        bv := vmap(data.value, 0, maxdata, bx1, bx2)
        line(bx1, y+hts, bv, y+hts, ts, "lightgray")
        text(bv+0.5, y+(hts/2), fmt.Sprintf("%.1f", data.value), hts, "rgb(127,0,0)")
        y -= linespacing
    }
}

```

## Generating a Barchart

# Go 1.1.2 Build and Test Times



```
$ (echo '<deck><slide>'; go run deckbc.go; echo '</slide></deck>')
```



```
go get github.com/ajstarks/deck/vgdeck
```



```
go get github.com/ajstarks/deck/pdfdeck
```



```
go get github.com/ajstarks/deck/svgdeck
```

## pdfdeck [options] file.xml...

- sans, -serif, -mono [font] specify fonts
- pagesize [w,h, or Letter, Legal, Tabloid, A2-A5, ArchA, Index, 4R, Widescreen]
- stdout (output to standard out)
- outdir [directory] directory for PDF output
- fontdir [directory] directory containing font information
- author [author name] set the document author
- title [title text] set the document title
- grid [percent] draw a percent grid on each slide

## svgdeck [options] file.xml...

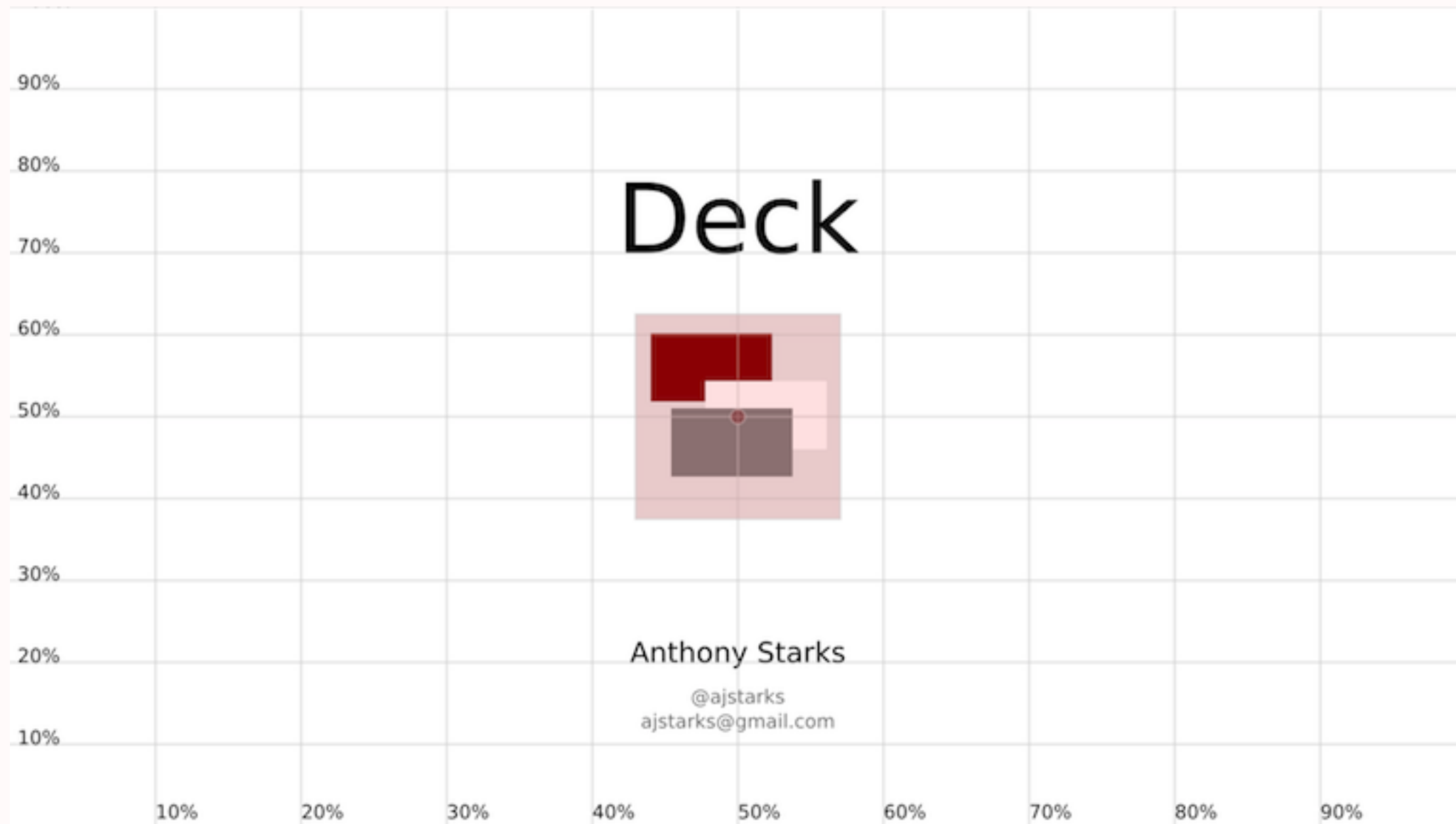
- sans, -serif, -mono [font] specify fonts
- pagesize [Letter, Legal, A3, A4, A5]
- pagewidth [canvas width]
- pageheight [canvas height]
- stdout (output to standard out)
- outdir [directory] directory for PDF output
- title [title text] set the document title
- grid [percent] draw a percent grid on each slide

**vgdeck [options] file.xml...**

- loop [duration] loop, pausing [duration] between slides
- slide [number] start at slide number
- w [width] canvas width
- h [height] canvas height
- g [percent] draw a percent grid

# vgdeck Commands

<code>+, Ctrl-N, [Return]</code>	Next slide
<code>-, Ctrl-P, [Backspace]</code>	Previous slide
<code>^, Ctrl-A</code>	First slide
<code>\$, Ctrl-E</code>	Last slide
<code>r, Ctrl-R</code>	Reload
<code>x, Ctrl-X</code>	X-Ray
<code>/, Ctrl-F [text]</code>	Search
<code>s, Ctrl-S</code>	Save
<code>q</code>	Quit



X-Ray mode shows the percent grid, and highlights images



[github.com/ajstarks/deck](https://github.com/ajstarks/deck)



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