

# 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>

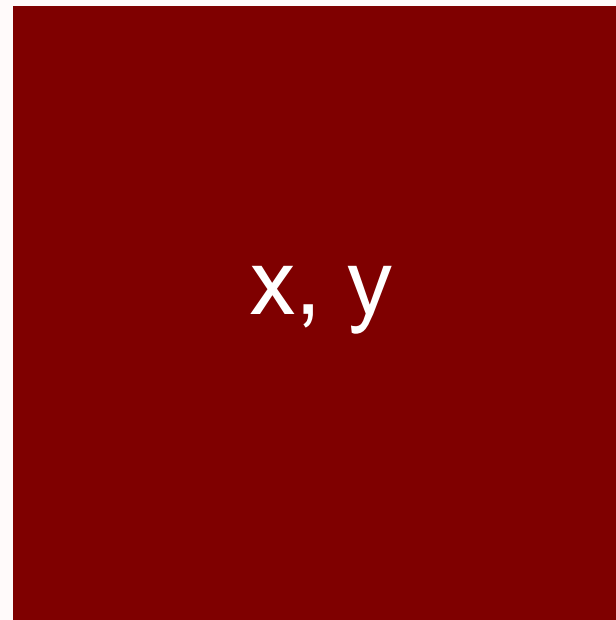
height



width

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

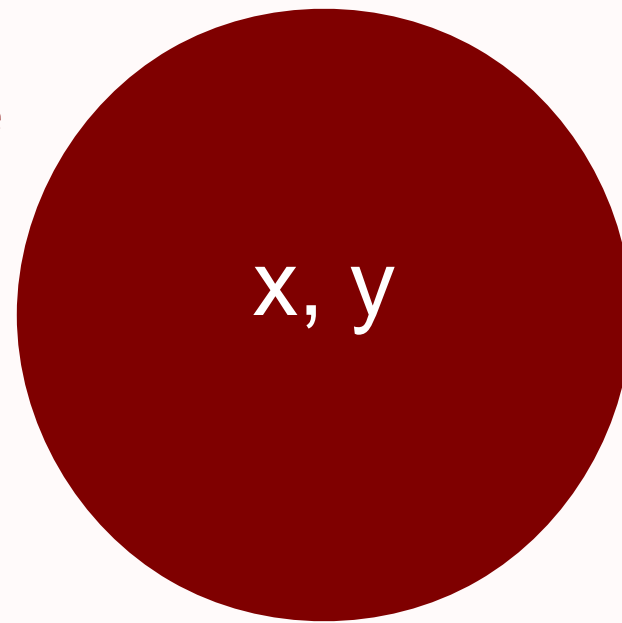
height (relative  
to element  
or canvas  
width)



width

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

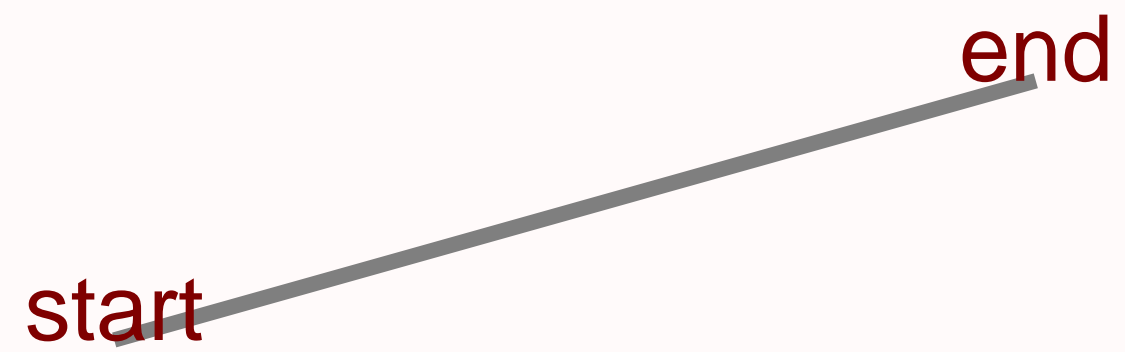
height (relative  
to element  
or canvas  
width)



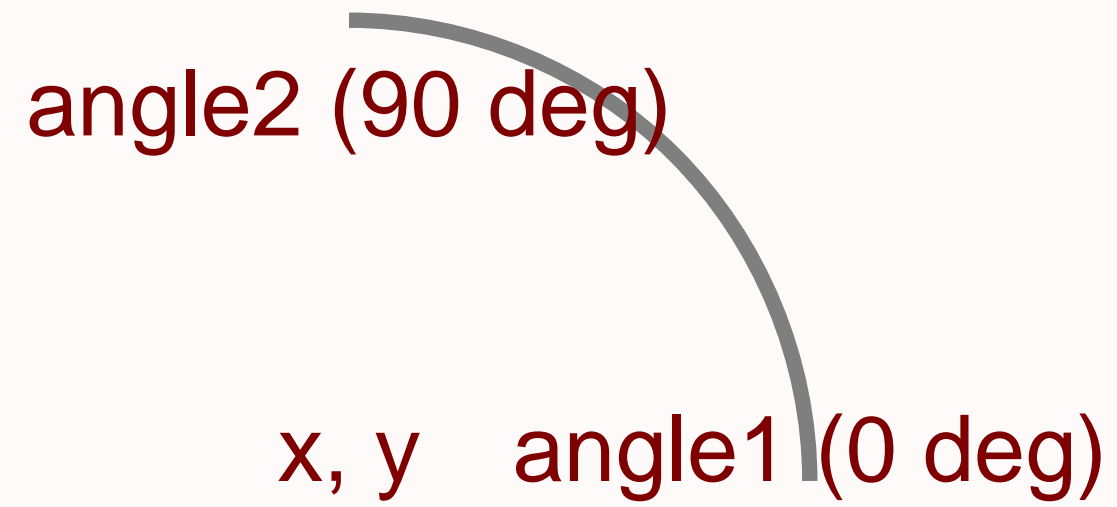
width

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



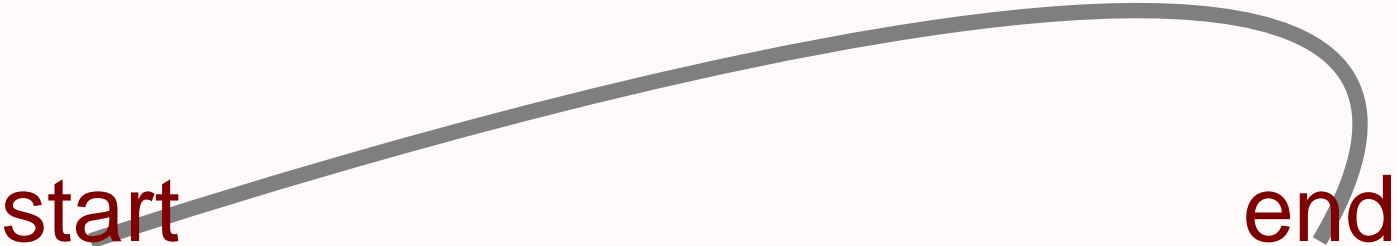


```
<line ... />
```



`<arc ... />`

control



start

end

<curve ... />

Markup and Layout

Start the deck

```
<deck>
```

Set the canvas size

```
<canvas width="1024" height="768" />
```

Begin a slide

```
<slide bg="white" fg="black">
```

Place an image

```
<image xp="70" yp="60" width="256" height="179" name="work.png" caption="Desk"/>
```

Draw some text

```
<text xp="20" yp="80" sp="3">Deck uses these elements</text>
```

Make a bullet list

```
<list xp="20" yp="70" sp="2" type="bullet">
```

```
<li>text, list, image</li>
```

```
<li>line, rect, ellipse</li>
```

```
<li>arc, curve</li>
```

End the list

```
</list>
```

Draw a line

```
<line xp1="20" yp1="10" xp2="30" yp2="10"/>
```

Draw a rectangle

```
<rect xp="35" yp="10" wp="4" hr="75" color="rgb(127,0,0)"/>
```

Draw an ellipse

```
<ellipse xp="45" yp="10" wp="4" hr="75" color="rgb(0,127,0)"/>
```

Draw an arc

```
<arc xp="55" yp="10" wp="4" hp="3" a1="0" a2="180" color="rgb(0,0,127)"/>
```

Draw a quadratic bezier

```
<curve xp1="60" yp1="10" xp2="75" yp2="20" xp3="70" yp3="10" />
```

End the slide

```
</slide>
```

End of the deck

```
</deck>
```

# Anatomy of a Deck

# Deck uses these elements

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



Desk



# Text and List Markup

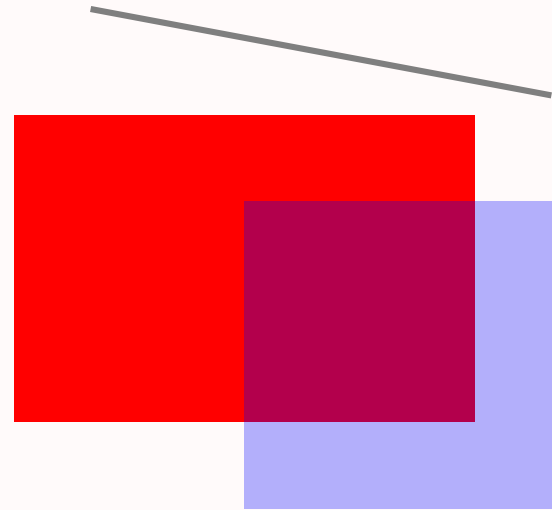
Position, size	<code>&lt;text xp="..." yp="..." sp="..."&gt;</code>
Block of text	<code>&lt;text ... type="block"&gt;</code>
Lines of code	<code>&lt;text ... type="code"&gt;</code>
Attributes	<code>&lt;text ... color="..." opacity="..." font="..." align="..."&gt;</code>
Position, size	<code>&lt;list xp="..." yp="..." sp="..."&gt;</code>
Bullet list	<code>&lt;list ... type="bullet"&gt;</code>
Numbered list	<code>&lt;list ... type="number"&gt;</code>
Attributes	<code>&lt;list ... color="..." opacity="..." font="..." align="..."&gt;</code>

# Common Attributes for text and list

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



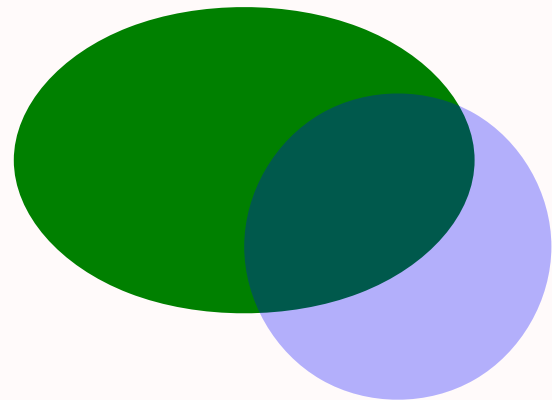
# Graphics Markup



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

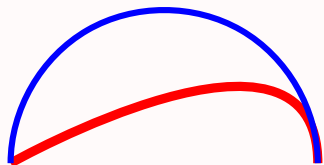
```
<rect xp="10" yp="60" wp="15" hr="66.6" color="red"/>
```

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



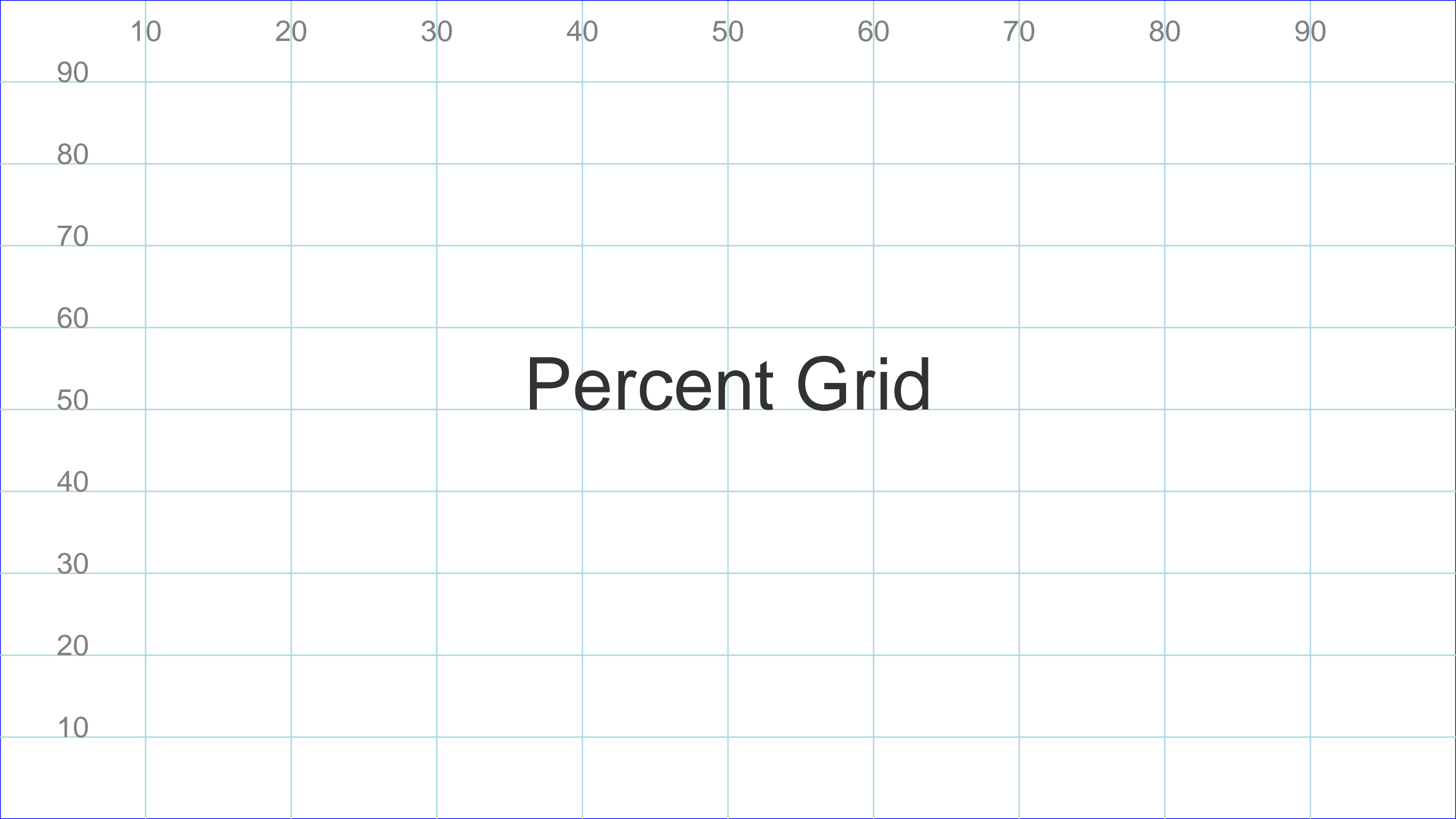
```
<ellipse xp="10" yp="35" wp="15" hr="66.66" color="green"/>
```

```
<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

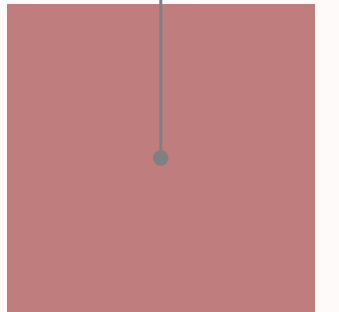
10%, 50%

Hello

50%, 50%



90%, 50%



Percentage-based layout

bullet

- Point A
- Point B
- 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>`

bullet

- Point A
- Point B
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plain

First item

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1. This
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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

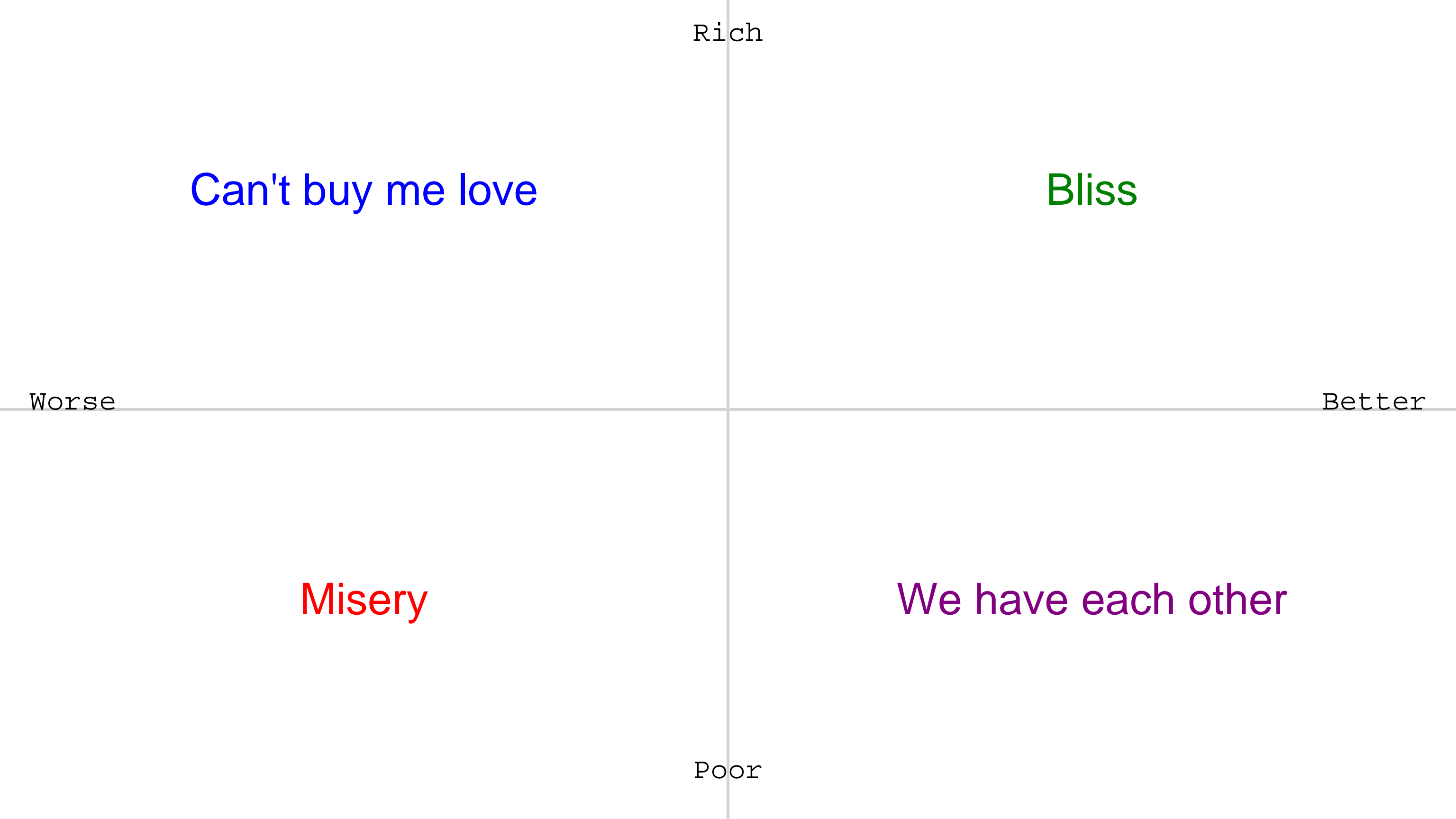
Seven

Eight



Rocks

This is not a notecard



Rich

Can't buy me love

Bliss

Worse

Better

Misery

We have each other

Poor

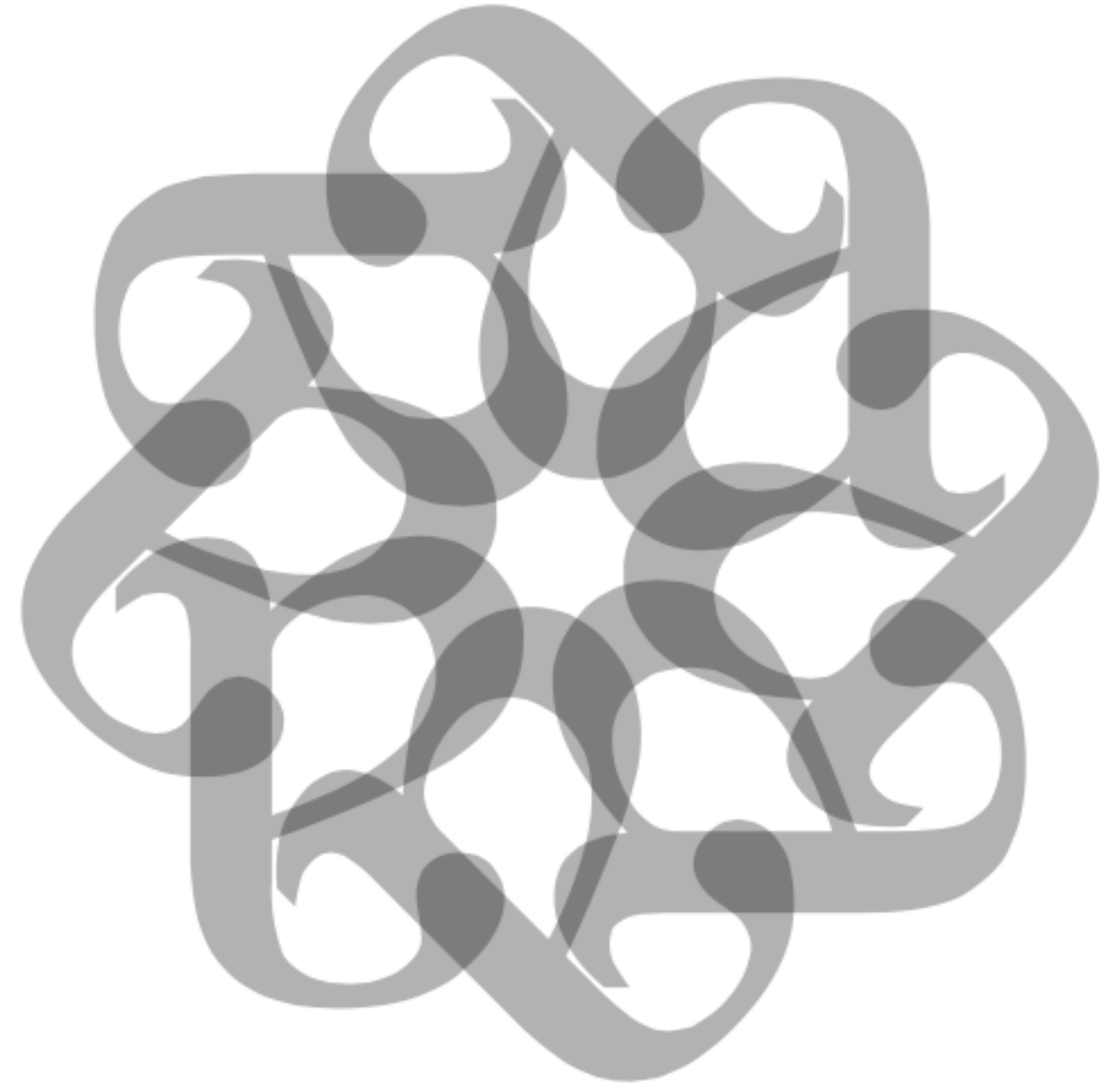
## Code

```
package main

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

func main() {
    canvas := svgo.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  
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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. In the upper center, a bright sunburst or light flare breaks through a layer of white, wispy clouds. Below this, a thick, dark blue-grey band of clouds stretches across the middle. In the lower half, more white, puffy clouds are visible against a deep blue sky. The overall mood is dramatic and atmospheric.

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

FOR, LO,

the winter is past,

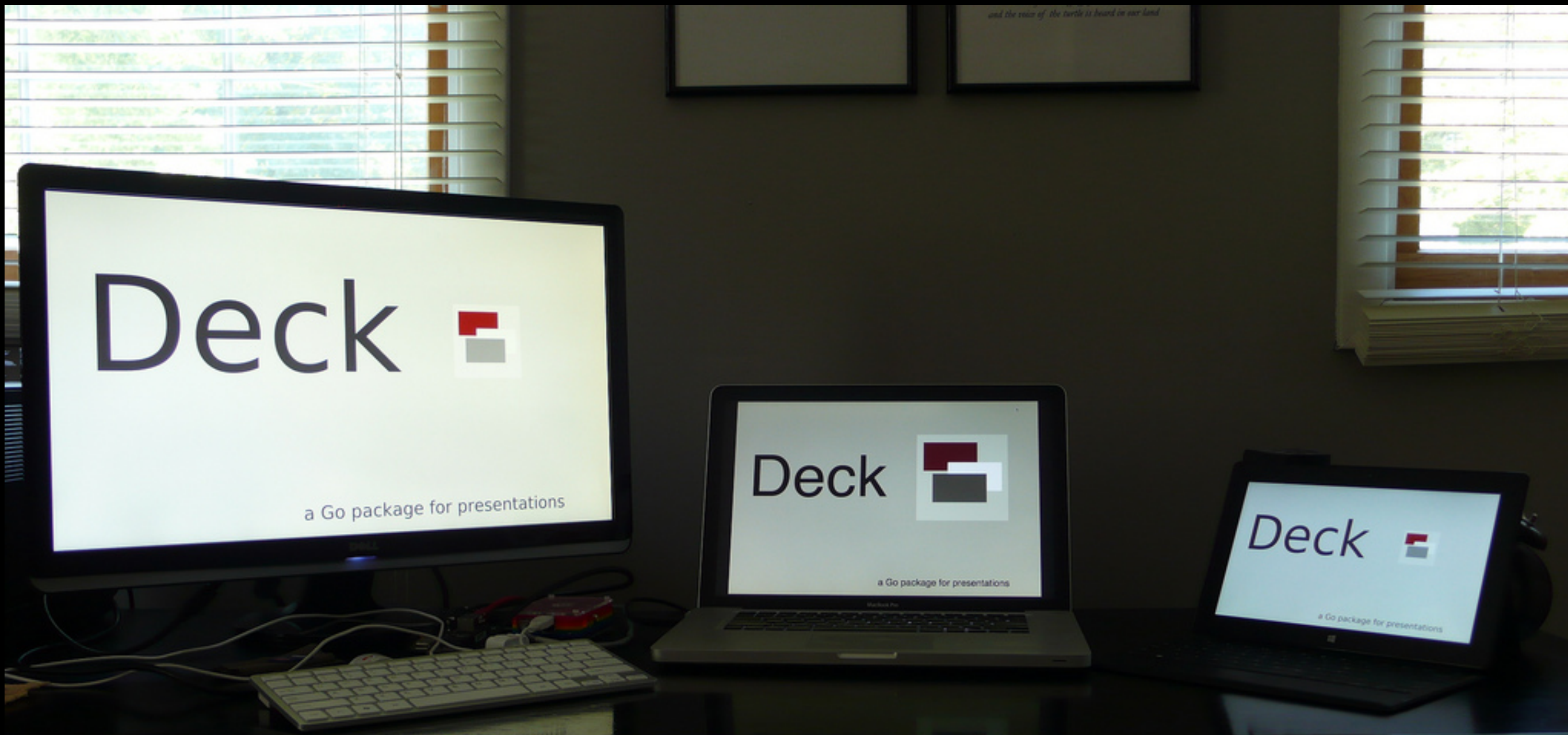
the rain is over and gone;

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

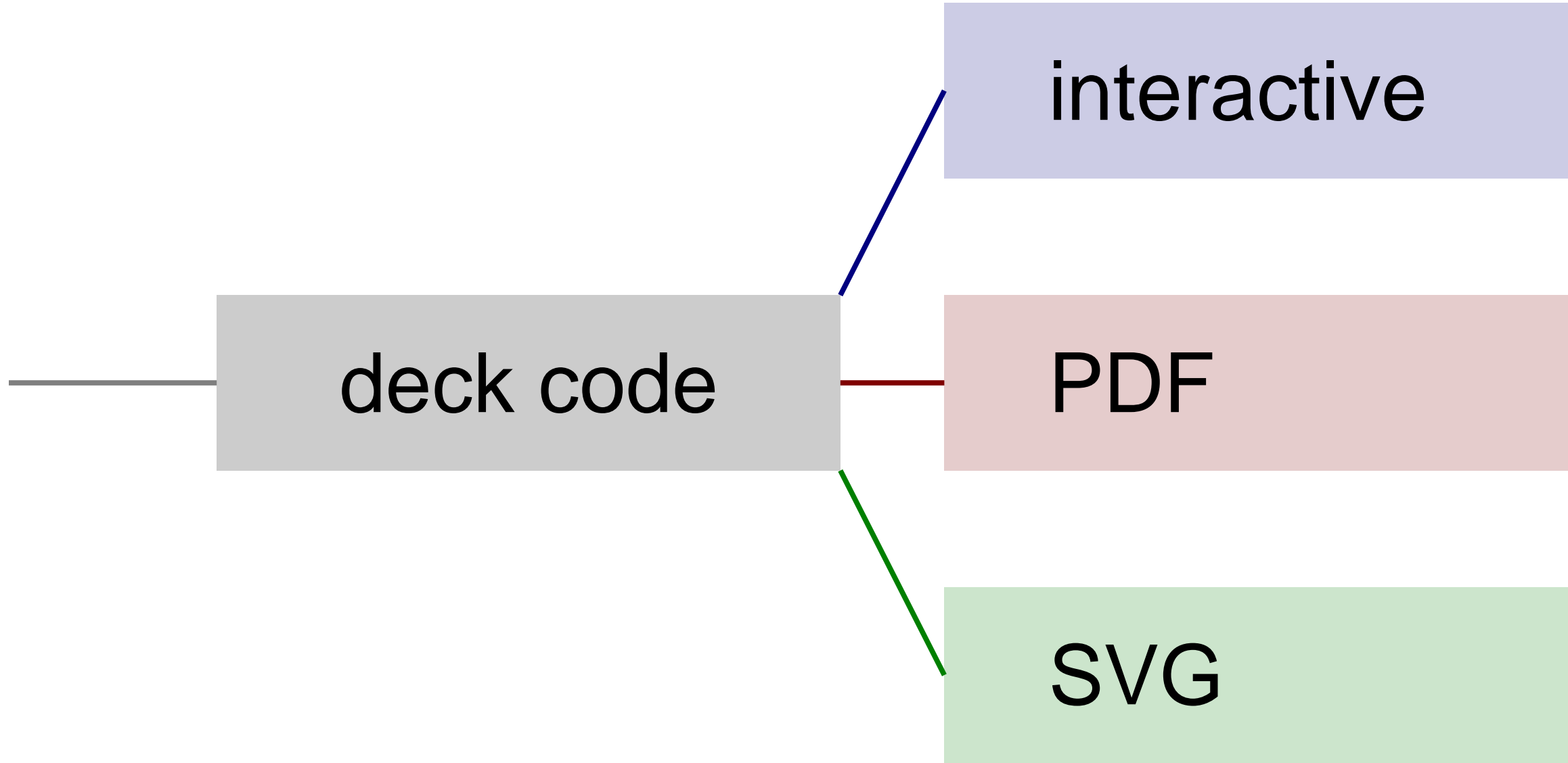
Process

deck code

interactive

PDF

SVG



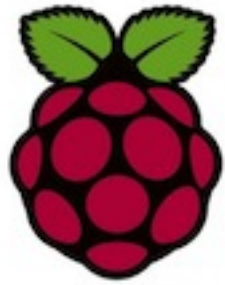


```
func main() {  
    benchmarks := []Bardata{  
        {"Macbook Air", 161.498},  
        {"MacBook Pro (2008)", 284.868},  
        {"BeagleBone Black", 2860.26},  
        {"Raspberry Pi", 5311.09},  
    }  
    ts := 2.5  
    hts := ts / 2  
    x := 10.0  
    bx1 := x + (ts * 12)  
    bx2 := bx1 + 50.0  
    y := 60.0  
    maxdata := 5400.0  
    linespacing := ts * 2.0  
    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  
    }  
}
```

# Go 1.1.1 Build and Test Times (sec)



```
$ (echo '<slide><text xp="10" yp="80" sp="4">Go 1.1.1 Build and Test Times</text>'; go run deckbc.go; echo '</slide>')
```



```
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 [Letter, Legal, Tabloid, A2, A3, A4, A5, ArchA, Index, 4R, Widescreen]
- pagewidth [page width (pt)]
- pageheight [page height (pt)]
- 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

`+, Ctrl-N, [Return]`

Next slide

`-, Ctrl-P, [Backspace]`

Previous slide

`^, Ctrl-A`

First slide

`$, Ctrl-E`

Last slide

`r, Ctrl-R`

Reload

`x, Ctrl-X`

X-Ray

`/, Ctrl-F [text]`

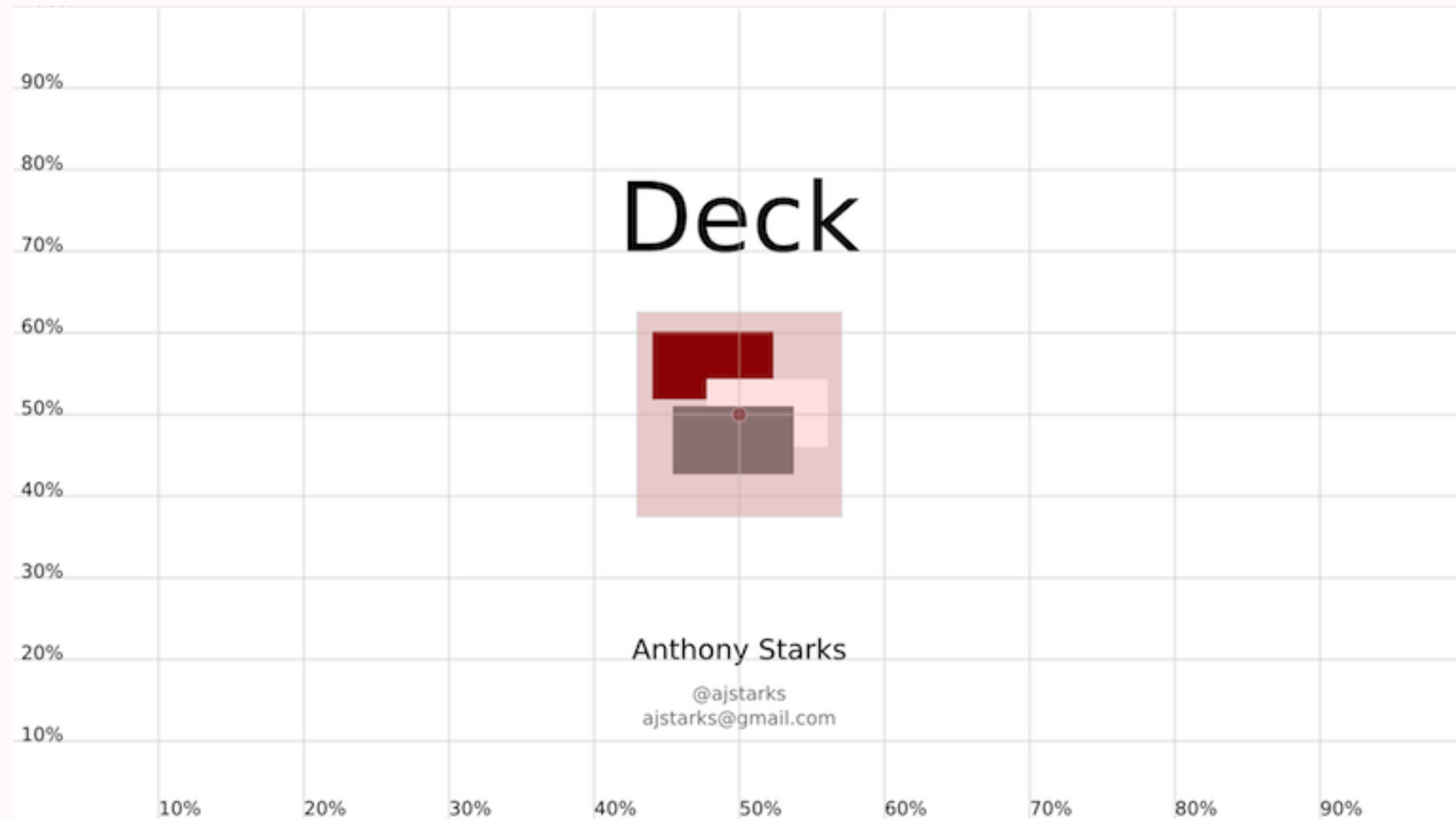
Search

`s, Ctrl-S`

Save

`q`

Quit



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



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



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