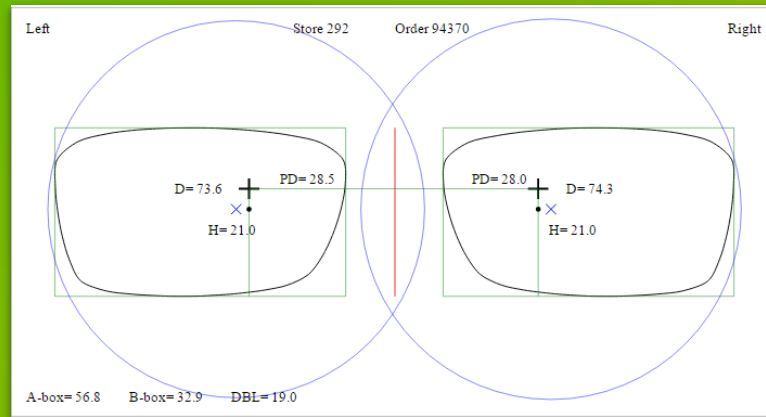


# a solution using Scalable Vector Graphics



EMEA PUG Challenge - 2018  
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Alphen aan den Rijn – Netherlands

Since 1998 Progress developer

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Flusso employee since 2007

# outline

- Customer
- Assignment
- Order process
- First idea
- Available data
- SVG
- Demo
- Final solution
- Result

# customer

Headoffice of optical retail chain for Benelux

Supplies more than 800 stores

6,000 orders per day

# assignment

## Improve diameter calculation.

- False negative order cancelation.
- False positive order cancelation.
- Discussion between head office and stores.
- Unsatisfied customers ... waiting too long.

# order process

Frontend application with limited validation.

Backend application with extensive validation.

Supplier does final validation.

# available data

- Frame scan
- Type of glasses
- Type of lens
- Customer recipe

# frame scan



```
"EYE: R"  
"AB: 510/328"  
"MA: 64.6"  
"Mont: 30035581"  
" (2452 0000) "  
" (2466 0010) "  
" (2480 0020) "  
" (2494 0030) "  
" (2509 0040) "  
" (2521 0050) "  
" (2534 0060) "  
" (2548 0070) "  
" (2561 0080) "  
" (2575 0090) "  
" (2586 0100) "  
" (2598 0110) "  
" (2609 0120) "  
" (2617 0130) "  
" (2624 0140) "  
" (2628 0150) "  
" (2633 0160) "  
" (2631 0170) "  
" (2628 0180) "  
" (2623 0190) "  
" (2613 0200) "  
" (2603 0210) "  
" (2590 0220) "  
" (2572 0230) "  
" (2553 0240) "  
" (2531 0250) "  
" (2508 0260) "
```



# types of glasses

- Multi-focal or bi-focal glasses
- Glasses for farsighted (reading a book)
- Glasses for nearsighted (driving a car)
- Office glasses

# type of lens

- Singlefocal
- Multifocal (trifocal, officeview, etc.)
- Bifocal

# recipe of the customer

- Sfere
- Cylinder (agstigmatism)
- Addition
- Prism
- Pupil distance (reading and far away)
- Lens height (reading and far away, depends on frame)

# first idea

"A picture is worth a thousand words"

Make the order visible

Make it interactive

## HOW?!

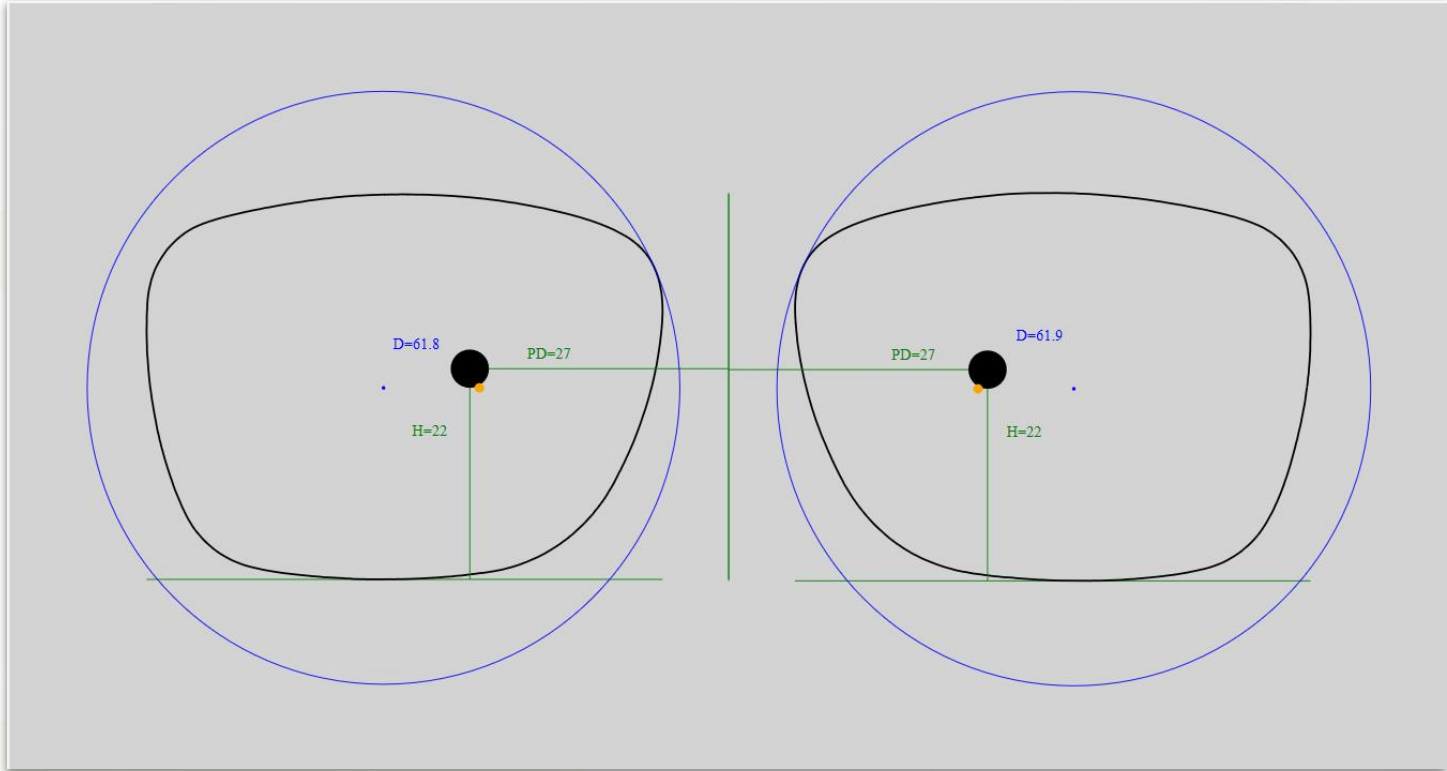
# SVG (Scalable Vector Graphics)

```
<svg width="150" height="130">
  <rect width="100%" height="100%" style="stroke: gray; fill: yellow; stroke-width: 1;"></rect>
  <circle stroke="blue" fill="orange" cx="50" cy="50" r="40"></circle>
  <g transform="translate(50,50)">
    <line stroke="green" stroke-width="2" x1="10" y1="10" x2="-10" y2="-10"></line>
    <line stroke="green" stroke-width="2" x1="-10" y1="10" x2="10" y2="-10"></line>
  </g>
  <text style="fill: black;" x="110" y="110">Text</text>
</svg>
```

**D3 javascript library.**

<https://d3js.org>

**demo**



# final solution

- Just an image not interactive
- Don't draw a pupil but a cross instead
- Flip image horizontally
- Send realsize image as pdf by email
- After browser upgrade send a link
- Use d3.path instead of polygon

## Demo!



# result

99.9 % reliable diameter calculation

Save 10 hours of work each week

80-90 % less rejections from supplier

# questions?

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Links used during the demo's:

<http://www.kelters.nl/gga>

<https://jsfiddle.net/Ries/sw9qwe72>

<https://jsfiddle.net/Ries/v2xsdoLp>

<https://jsfiddle.net/Ries/s7puuyqf>

<https://www.flusso.nl/dagelijks-een-uur-tijdsinst-met-eenvoudige-svg-oplossing>

<https://github.com/d3/d3/wiki/Gallery>

<https://d3js.org>

<http://wkhtmltopdf.org>