YouPatch | A Racket-powered startup

www.youpatch.com | by Daniel Prager @agilejitsu

Gnome Business Plan

Dan's Business meta-Plan

Phase 1: Find something people love

Phase 2: Minimize or transform the tedious bits

Phase 3: Success

Overview

1. Video: What is YouPatch?
2. Hacking Groucho
3. A Lean Startup
4. Racket and exploratory programming

Part One

Play Video: What is YouPatch?

Part Two

Hacking Groucho

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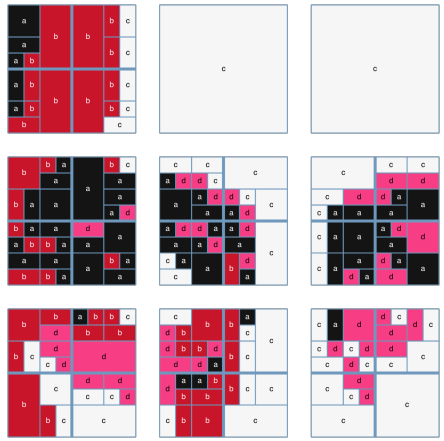
The original hack (September 2013)

DrRacket + `2htdp/image` library + a weekend of programming...

Original Groucho

Reduce resolution

Recolor



Merge "pixels"

```
square rectangle line text beside above overlay
```

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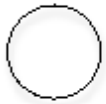
What to buy

Fabric 1: 1 yard (95 cm)

Fabric 2: 3/4 yard (70 cm)

Fabric 3: 1 2/3 yard (1.6 m)



Fabric 4: 1 yard (95 cm)

What to cut

From fabric 1, cut:

- 5 squares of 8.5" x 8.5"
- 2 squares of 4.5" x 4.5"
- 23 rectangles of 4.5" x 2.5"
- 23 squares of 2.5" x 2.5"
- 77 rectangles of 2.5" x 1.5"
- 75 squares of 1.5" x 1.5"

From fabric 2, cut:

- 5 squares of 8.5" x 8.5"
- 3 rectangles of 8.5" x 4.5"
- 2 squares of 4.5" x 4.5"
- 5 rectangles of 4.5" x 2.5"
- 7 squares of 2.5" x 2.5"
- 49 rectangles of 2.5" x 1.5"
- 97 squares of 1.5" x 1.5"

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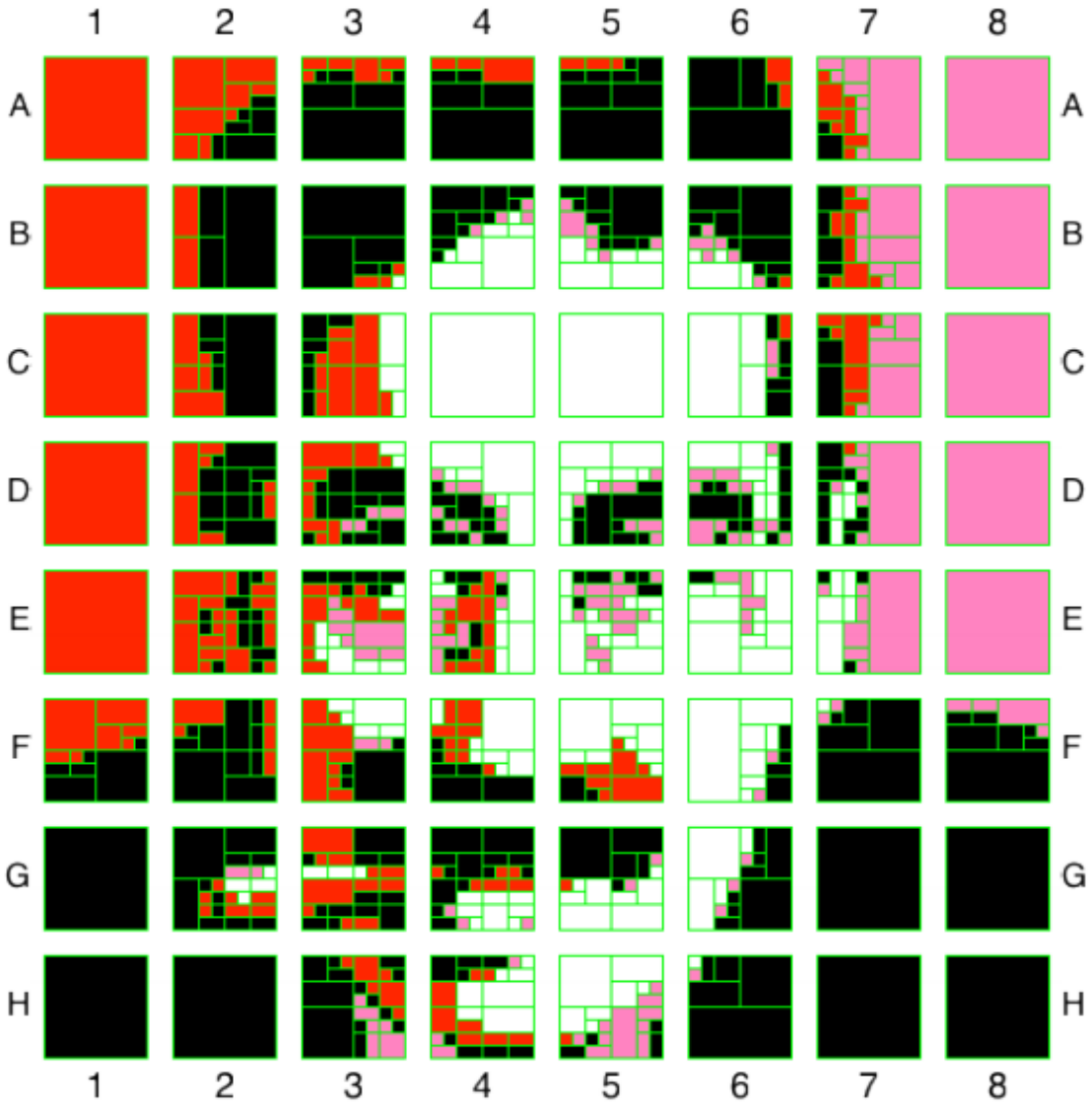

Andi and Groucho

Part Two

A Lean Startup

"A Startup is an organization formed to **search** for a repeatable and scalable business model." - *Steve Blank*

#lang lean-startup

```
(define (search product market resources morale)
  (cond [(fit? product market) ???]
        [(low? resources) ???]
        [(failing? product market) ???]
        [(low? morale) ???]
        [else ???]))

(search MVP initial-market ...)
```

The Initial Market and MVP (minimum viable product)

YouPatch is a web-site where Patchwork Quilters can

i. Upload an image

ii. Pixelate and edit for **free**

iii. Pay to download a customized PDF for 9.50 USD

Our Team

Patch Andi
Domain Expert, Marketing, etc.

Dan Prager
R&D, UX, Agile, etc.
Racket, Scribble, Bootstrap

John Barham
Web design, development, deployment, etc.
Python, Django, Mezzanine, JavaScript, Bootstrap

Product Design Challenges

- Make YouPatch easy to learn and use
- Key Trade-off: Image detail vs Ease of making

- Apply a User-Centered Design philosophy
  - Users make decisions, and exercise their creativity
  - Software handles the tedious bits

Product Development Challenges

- Research
  - Color reduction algorithm
  - Custom PDF generation
- Development: Racket in production
  - Performance?
  - Integration with other tech?

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We started with a teaser site (December 2013)

YouPatch

www.youpatch.com

Turn your favorite image into a stunning quilt!

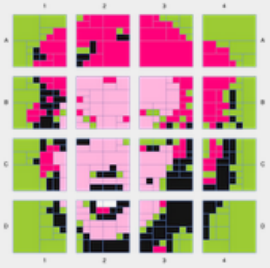
Coming soon: YouPatch makes pixel quilt design easy and fun.

1. Upload

2. Pixelate

3. Recolor & tweak

4. Finish & order



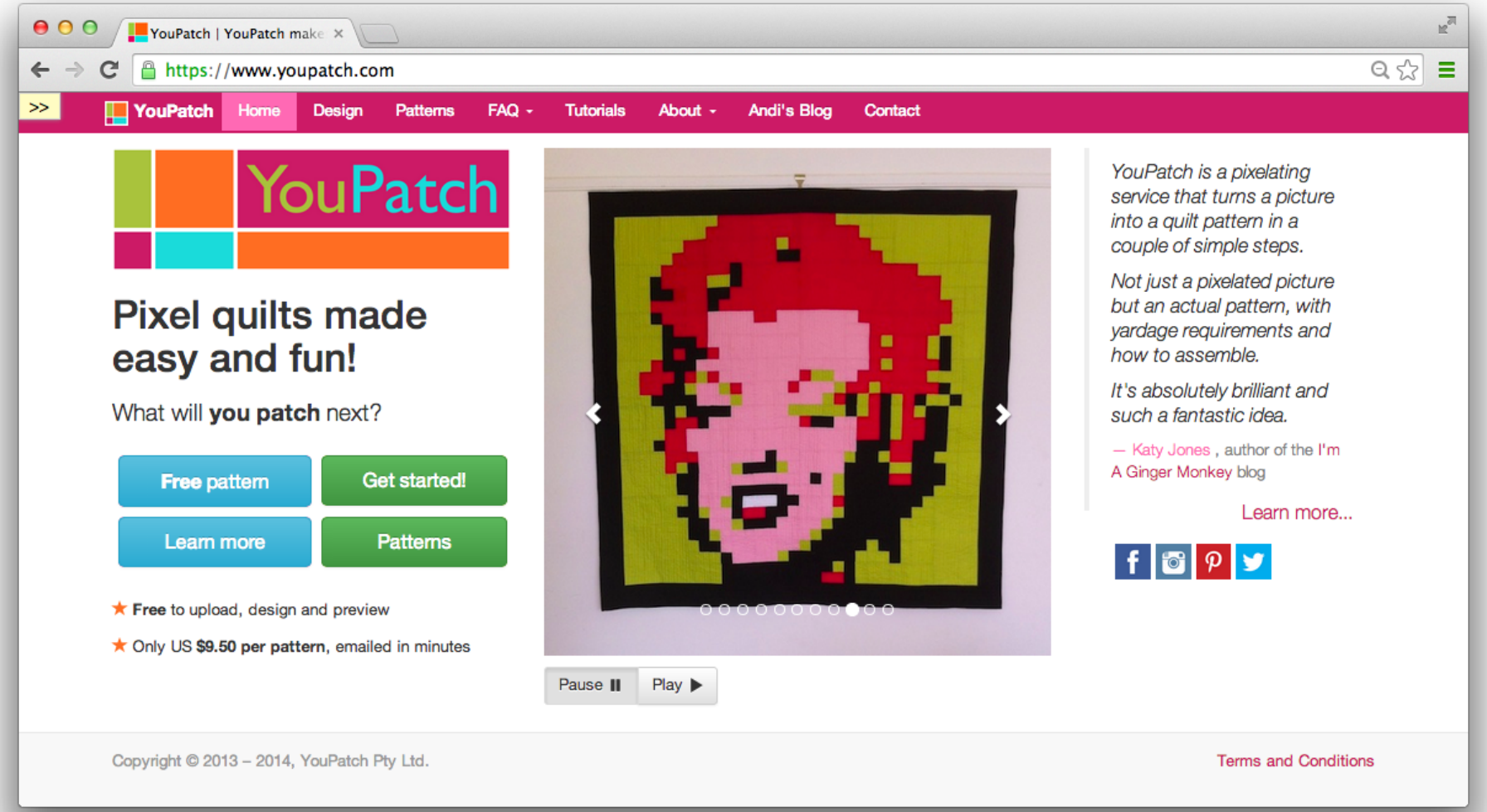
5. Awesomeness!

FREE Marilyn Pattern

Register for updates and we'll send you the Marilyn pattern for free.

Your name | Email | Register

In February 2014 we launched!



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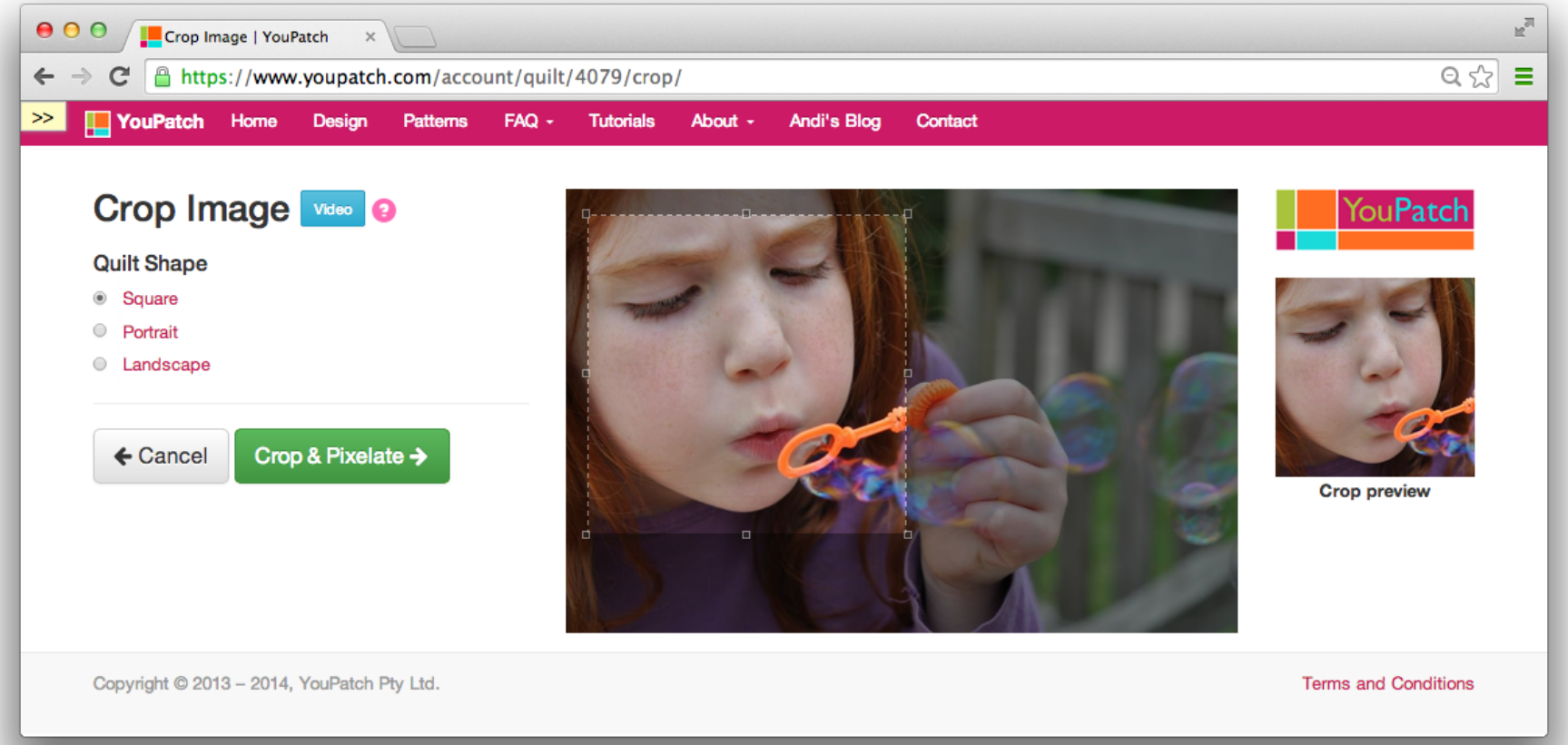
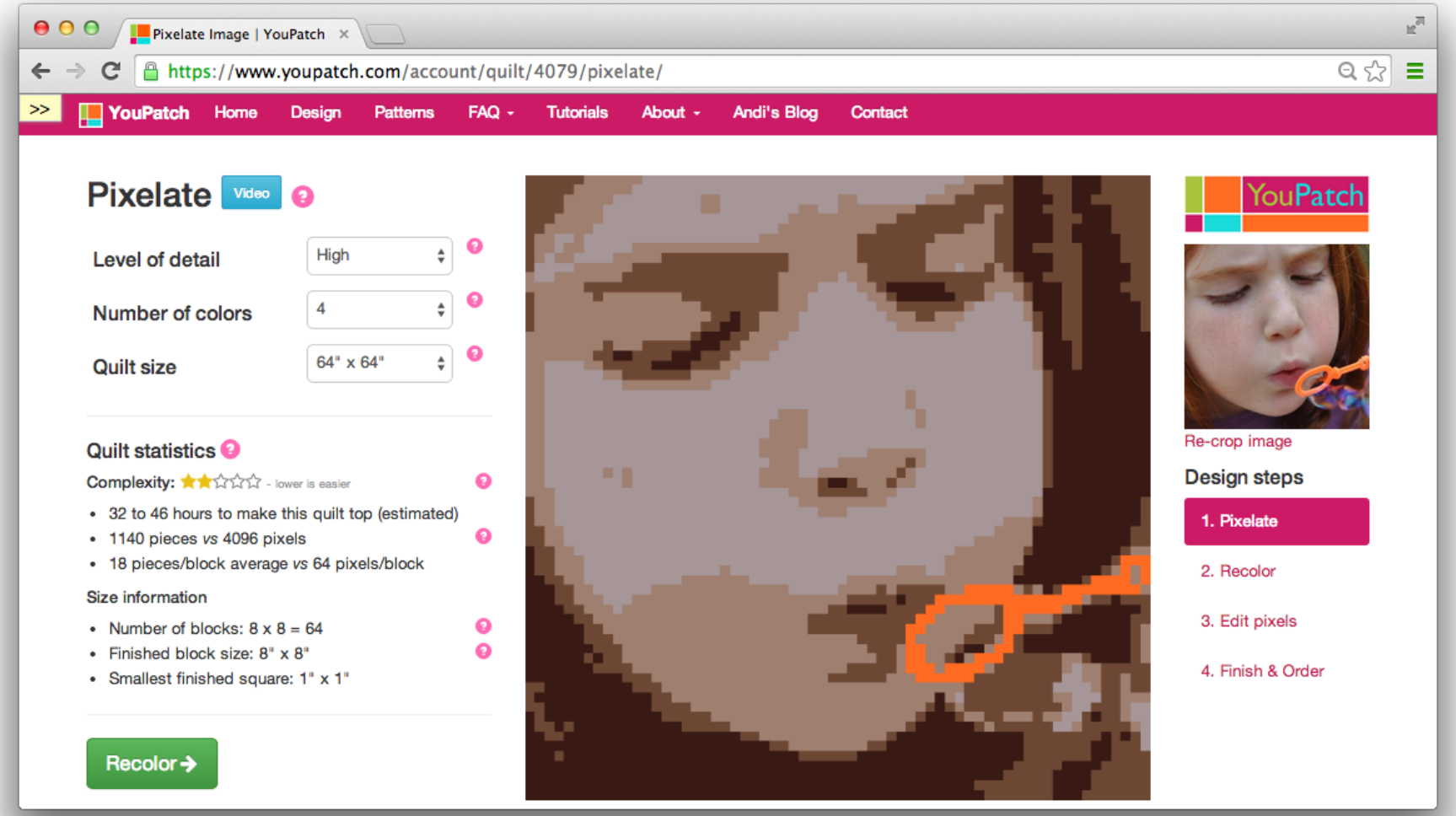
Step 0. Upload image & crop



Step 1. Pixelate



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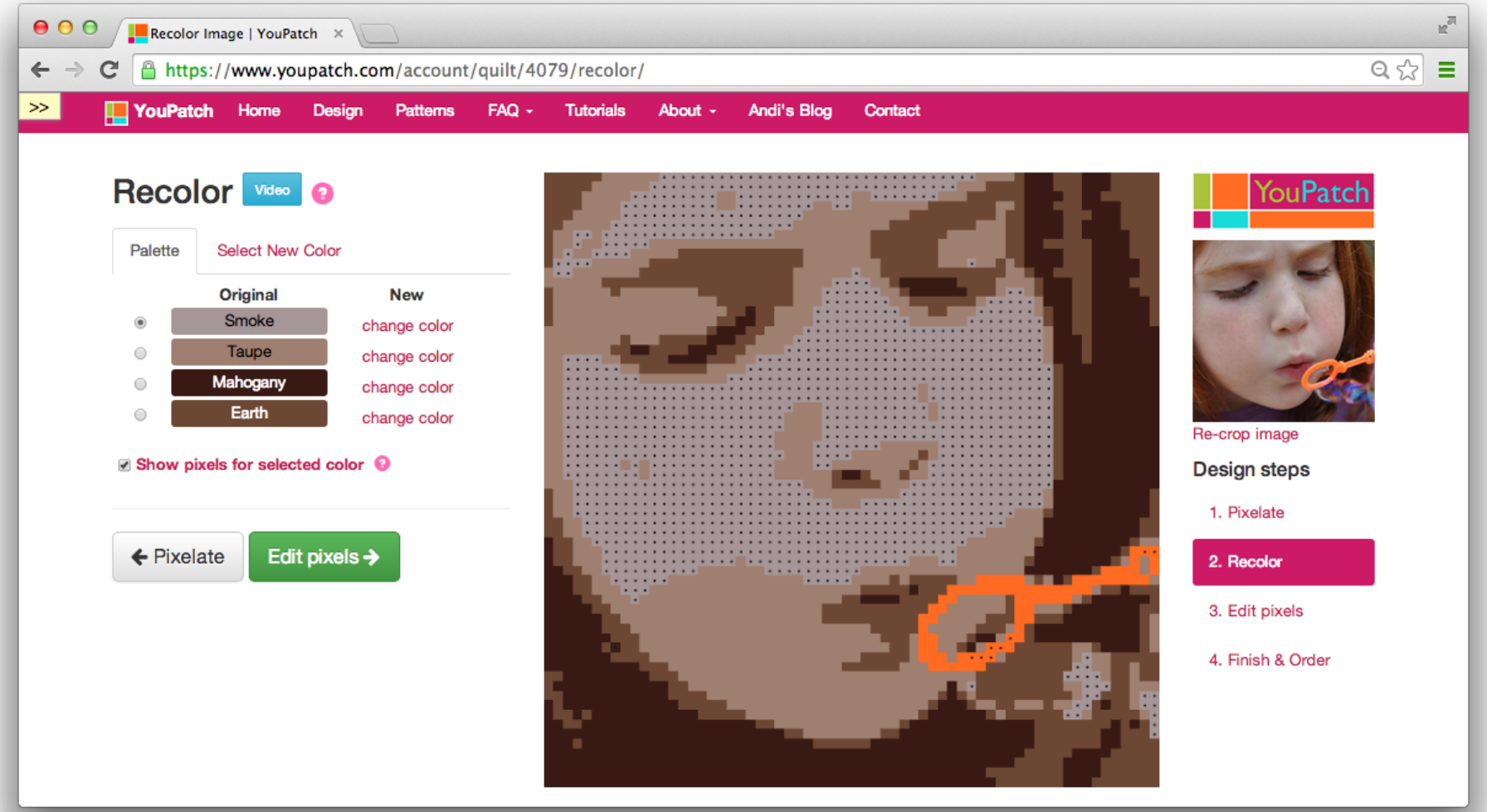
Step 2. Change fabric colors



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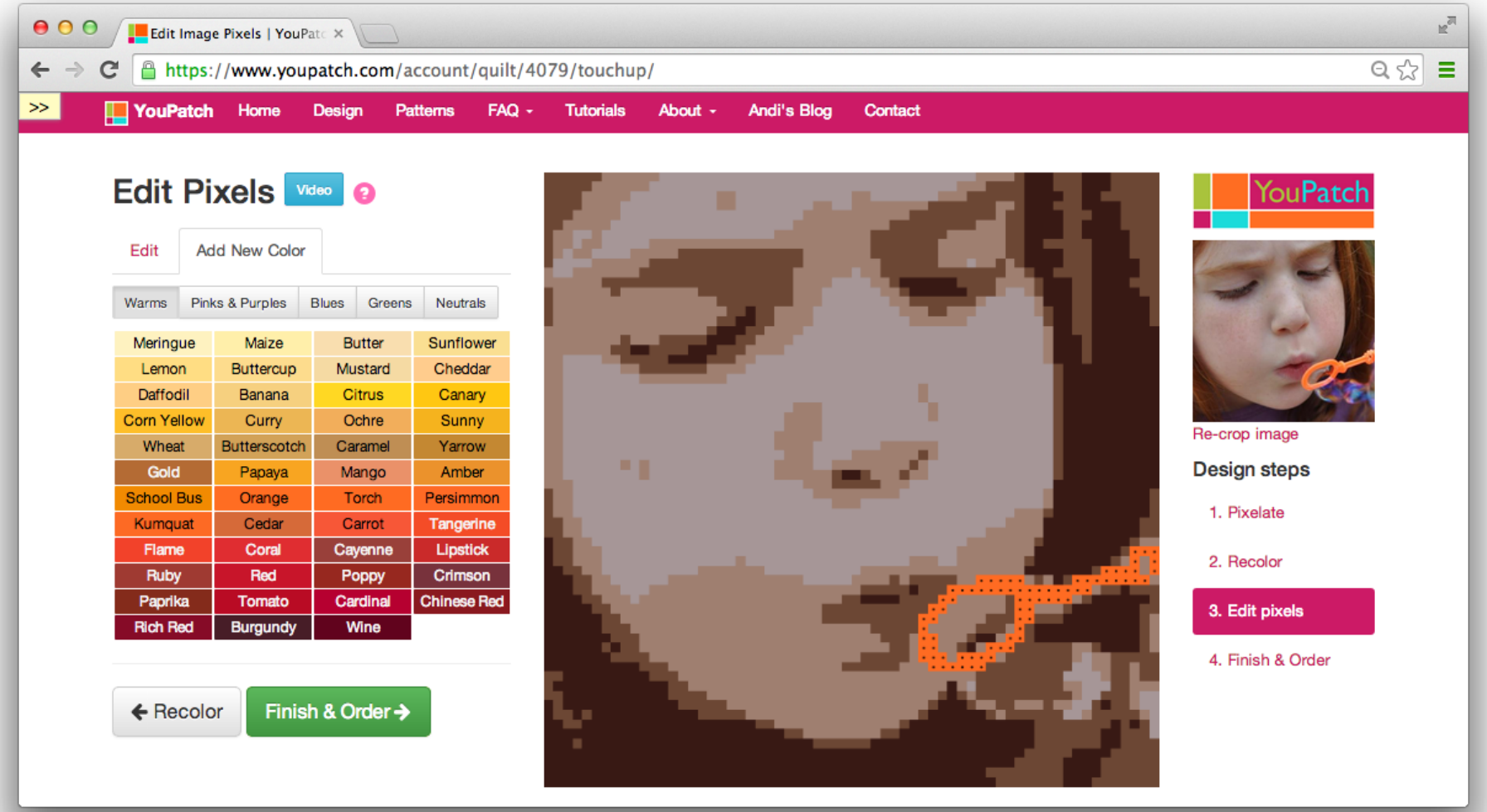
Step 3. Edit individual pixels



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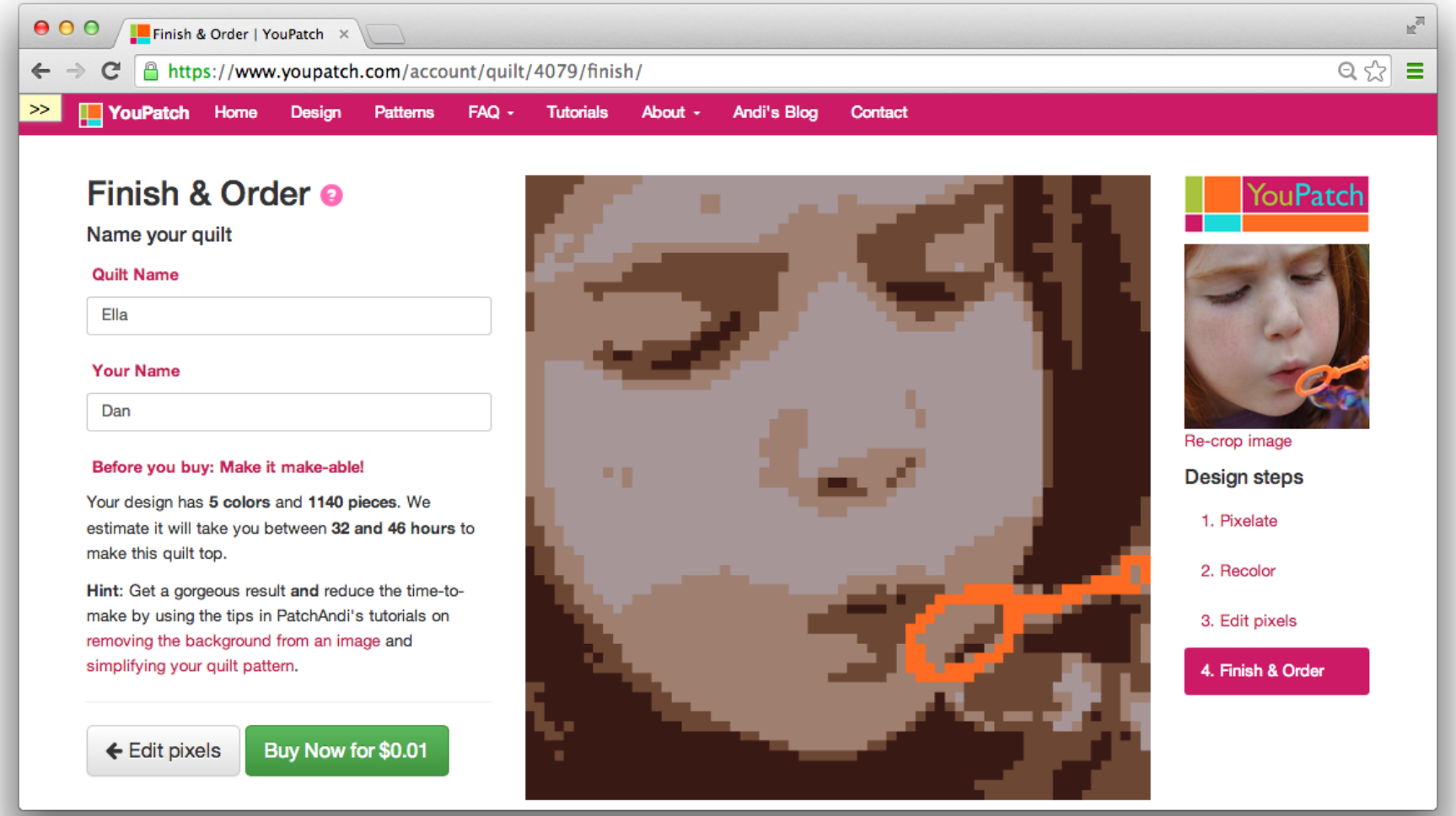
Step 4. You pay $9.50 for a customized PDF pattern



From the 19 page pdf...

Front page

YouPatch
www.youpatch.com

Ella
by Dan

Figure 1: Ella by YouPatch and Dan on August 30, 2014

Customised instructions

1 License

The Ella quilt pattern is licensed strictly for personal use to Daniel Prager (daniela.prager@gmail.com). It may not be re-sold, given away, or otherwise distributed without permission from YouPatch Pty Ltd. Please consult www.youpatch.com/faq/prices-licensing for details.

Note that production of more than one or two quilts for sale based on this pattern requires additional licensing. Please email info@youpatch.com if you wish to discuss a commercial license.

2 About the Ella quilt

- Finished block size: 8" × 8"
- Finished quilt size: 64" × 64"
- Seam allowance: ¼"

3 Fabric Yardage

- Kona Smoke: 1 1/2 to 1 3/4 yards
- Kona Earth: 1 to 1 1/4 yards
- Kona Taupe: 1 1/2 yards
- Kona Mahogany: 1 1/4 yards
- Kona Torch: 1/4 yard

Notes

- When a range is given, the first number is a tighter estimate, while the second is more generous to allow for the odd mistake, and stashing. See **Appendix B** for illustrations.
- The names of the fabrics refer to the Robert Kaufman Kona Cotton Solids range.
- Please note that colors can and do display differently on different monitors and print differently.

4 Cutting the Fabric

You will be cutting a total of 1140 pieces for the quilt top. See **Appendix B** for an efficient cutting scheme:

Kona Smoke

- cut 4 squares of 8½" × 8½"
- cut 11 rectangles of 4½" × 8½"
- cut 8 squares of 4½" × 4½"
- cut 33 rectangles of 2½" × 4½"
- cut 26 squares of 2½" × 2½"
- cut 70 rectangles of 1½" × 2½"
- cut 55 squares of 1½" × 1½"

Kona Earth

- cut 1 rectangle of 4½" × 8½"
- cut 3 squares of 4½" × 4½"
- cut 16 rectangles of 2½" × 4½"
- cut 34 squares of 2½" × 2½"
- cut 133 rectangles of 1½" × 2½"
- cut 145 squares of 1½" × 1½"

Kona Taupe

- cut 3 rectangles of 4½" × 8½"
- cut 3 squares of 4½" × 4½"
- cut 28 rectangles of 2½" × 4½"
- cut 36 squares of 2½" × 2½"
- cut 142 rectangles of 1½" × 2½"

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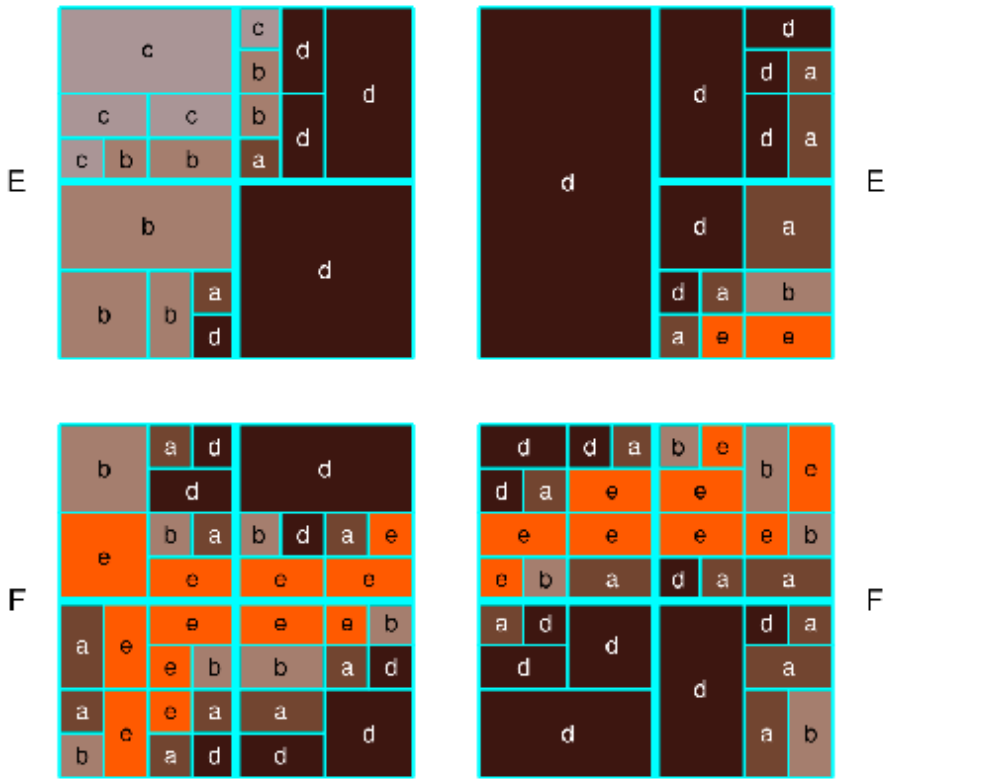
Packing in the value...

Quilting by numbers



a Kona Earth
b Kona Taupe
c Kona Smoke
d Kona Mahogany
e Kona Torch

Cutting guide

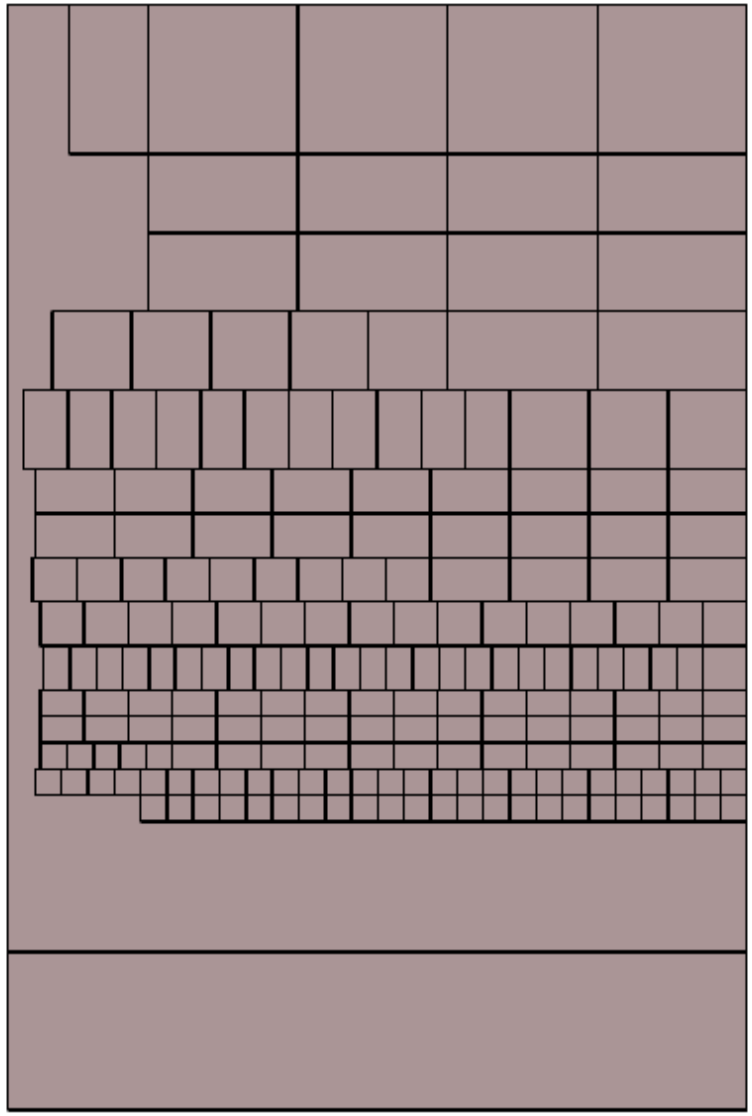
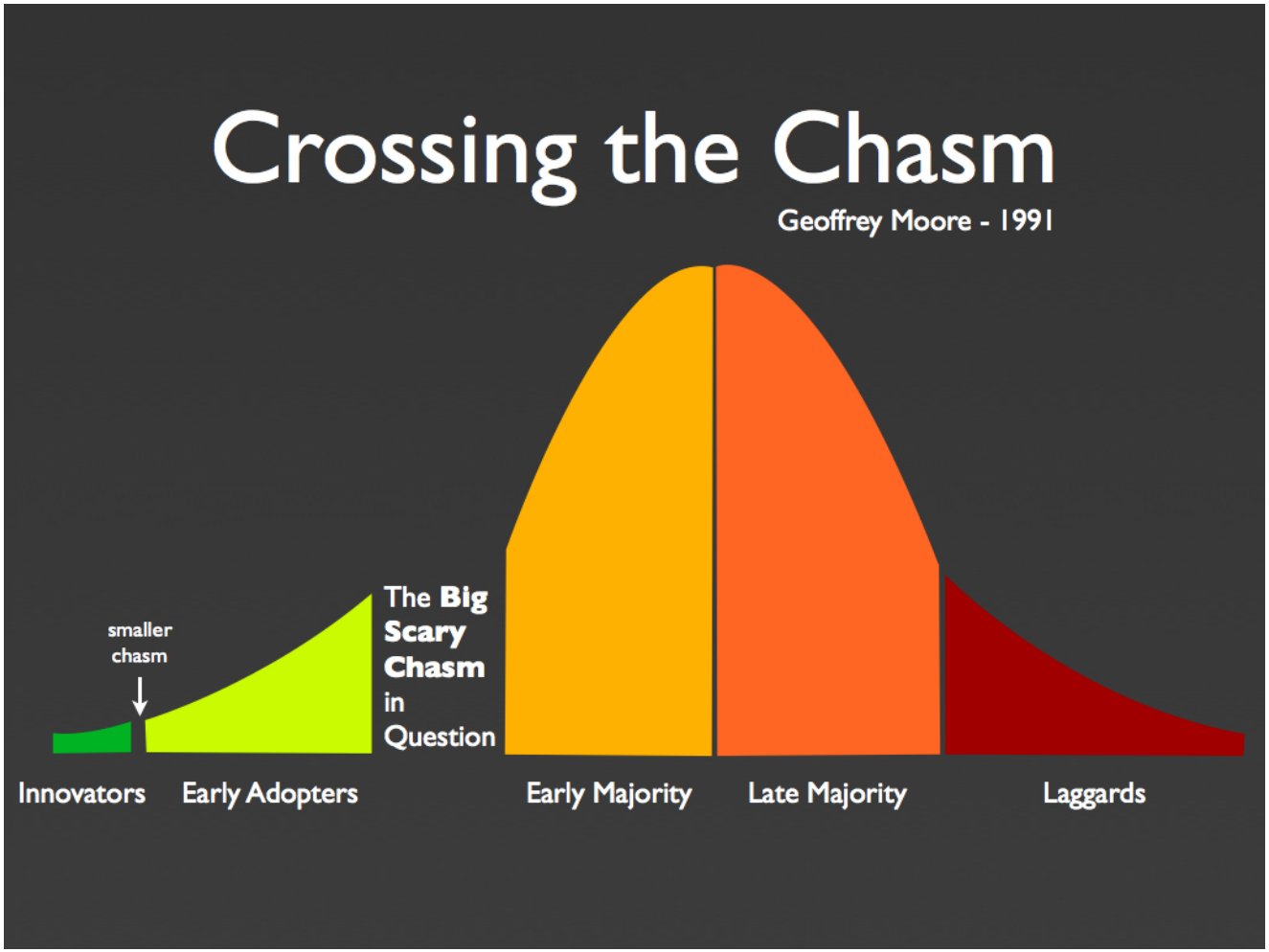


Figure 18: Kona Smoke: 1 1/2 to 1 3/4 yards

The challenge...



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What our customers are making...

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Featured in Aussie & UK quilting magazines

e.g. Love Patchwork & Quilting - March 2014

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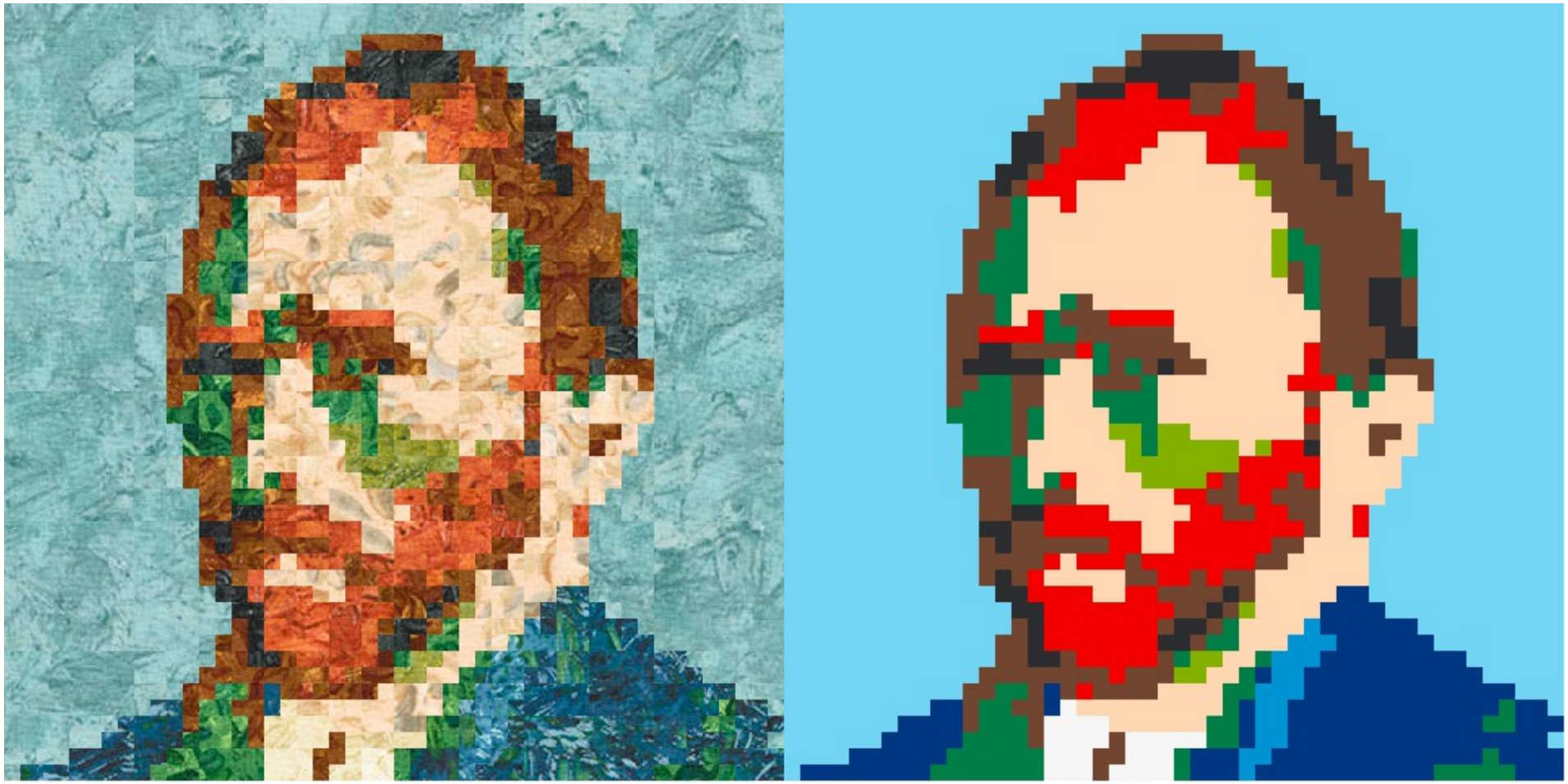
Collaboration with fabric manufacturers



e.g. Robert Kauffman Fabrics

Not there yet ...

- Support for our early adopters
  - Personalised support
  - Email newsletters
- Reaching the mainstream
  - Quilt and craft shows, US magazines
  - Iterate
  - Positive pivot?

Part Three

Racket and exploratory programming

Why Racket?

- Low barrier to entry; no real limits
- Fast, quality feedback:
  - DrRacket REPL, Racket community
- Powerful, clean abstractions. E.g.:
  - 2htdp/image, Scribble
- R & D, production, integration

Options for creative programmers

- Hobby programming
- Academia
- Regular job
- Startups

- **Why startups?** Fun, Freedom, Fame, Fortune
- **Why not?** Fear of failure, Feed the family
- **How?**
  - Self-funded: low cost (mainly sweat), low risk, DIY
  - Lean Startup approach and Agile development
  - Smart technology choices - e.g. Racket

Q & A

Links

- www.youpatch.com
- daniel.a.prager@gmail.com
- @agilejitsu