

Prawn Grid

Bringing the Power of Grids to Prawn

Andrew O'Brien

Prawn

```
Prawn::Document.generate("basic_images.pdf", :page_layout => :landscape) do
  pigs = "#{Prawn::BASEDIR}/data/images/pigs.jpg"
  image pigs, :at => [50,450], :scale => 0.5

  stef = "#{Prawn::BASEDIR}/data/images/stef.jpg"
  image stef, :at => [75, 75]

  stef = "#{Prawn::BASEDIR}/data/images/stef.jpg"
  image stef, :at => [500, 400], :width => 200, :height => 200

  text "Please enjoy the pigs", :size => 36, :at => [200,15]

  ruport = "#{Prawn::BASEDIR}/data/images/ruport.png"
  image ruport, :at => [400,200], :width => 150

  ruport = "#{Prawn::BASEDIR}/data/images/ruport_transparent.png"
  image ruport, :at => [50,525]
end
```

A lot of manual calculation of coordinates.

Prawn

```
Prawn::Do
  pigs =
  image p

  stef =
  image s

  stef =
  image s

  text "P

  ruport
  image r

  ruport
  image r

end
```



Ruport



Ruport
RUBY REPORTS



Please enjoy the pigs

Grids

The grid is a regulatory system which pre-empt's the basic formal decisions in the design process.

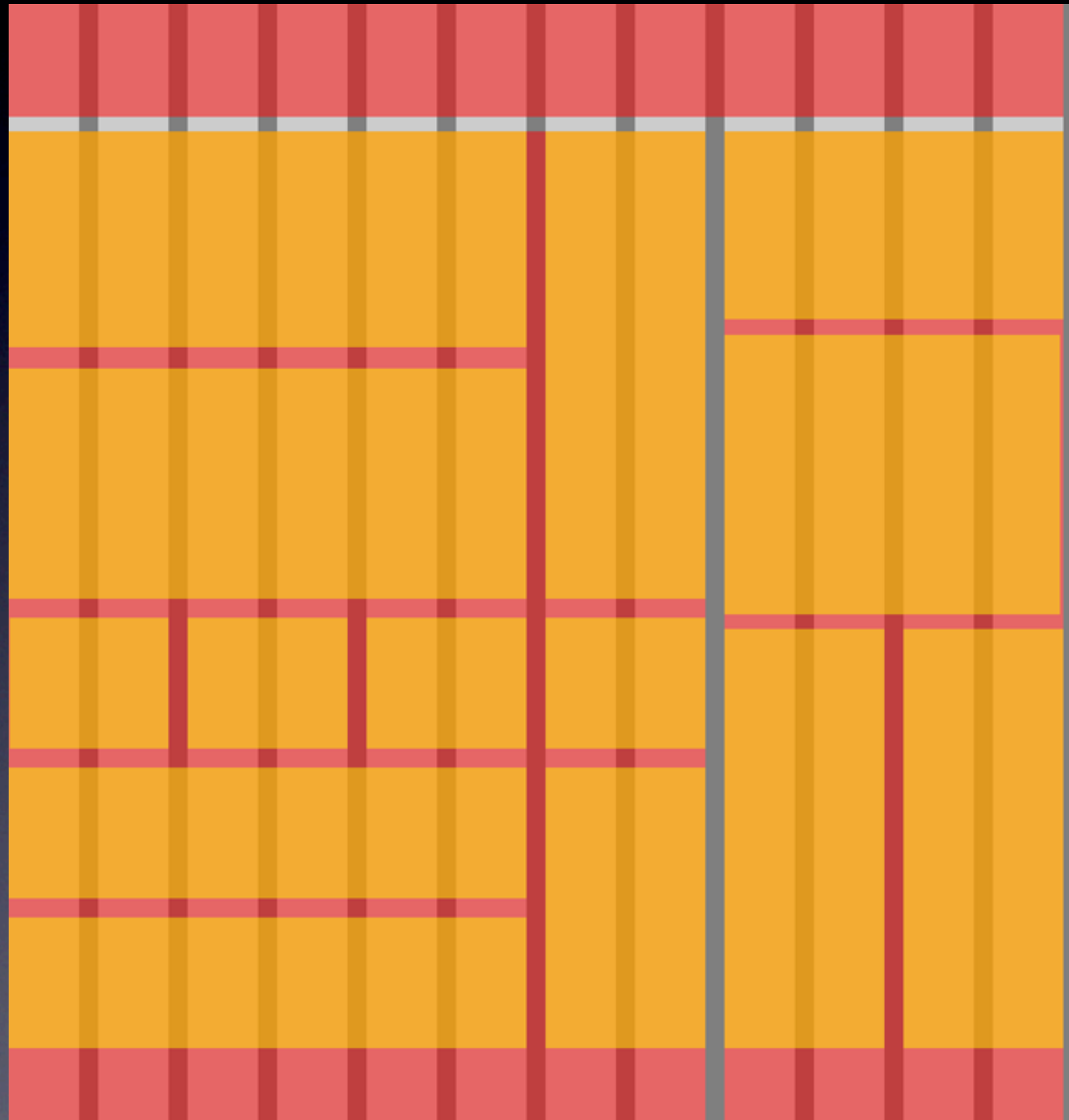
—*Mark Boulton*

They're sort of the convention-over-configuration of the print world

—*Me*

Grids aren't the only way. A lot of designers can come up with good non-grid or off-grid designs. I'm not one of them. I just want my automatically produced PDFs to look nice.

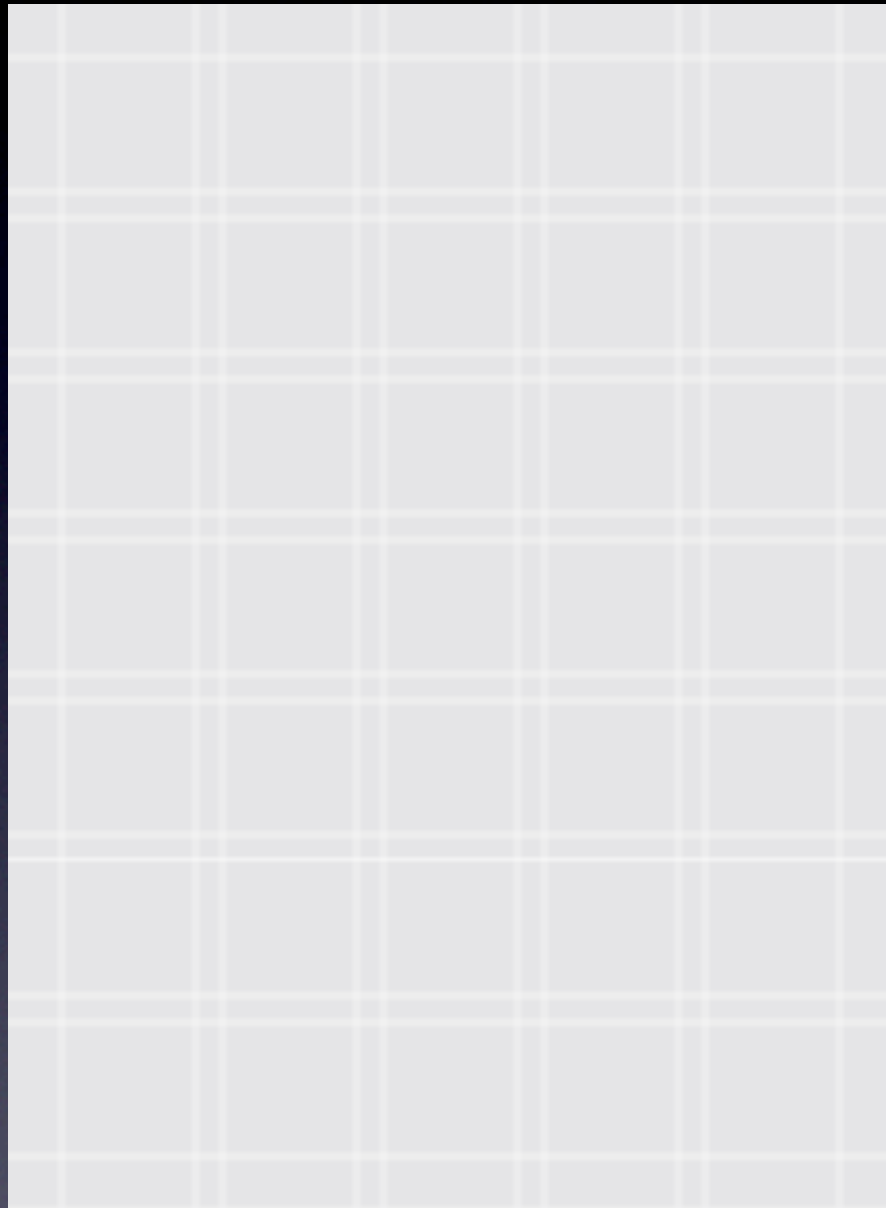
Grids



Rows
Columns
Gutters

More advanced grid systems use page ratio, but I'm not going into that here.

Grids



Vermont Symphony Orchestra		
Winter 2007 Season	Aaron Copland The Tender Land January 2007	Eric Satie Gymnopedie 1, 2 February 2007
	01/12/07 Middlebury College Center for the Arts 8:00 pm	02/03/07 Johnson State College Dibden Center for the Arts 8:00 pm
	01/19/07 Johnson State College Dibden Center for the Arts 8:00 pm	02/02/07 Castleton State College Fine Arts Center 8:00 pm
	01/26/07 Lyndon State College Alexander Twilight Theater 8:00 pm	02/17/07 Middlebury College Center for the Arts 8:00 pm

Grids

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Thousands of rare marine species discovered in Philippines

Coroner: USC kicker was drunk when he fell to his death

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• Anaheim, California

Introducing Prawn Grid

- `Prawn::Document#define_grid`
- `Prawn::Document#grid`

Prawn Grid

```
Prawn::Document.generate('example1.pdf') do |p|
  def draw_box(p, g)
    g.bounding_box do
      p.text g.name
      p.stroke_color = "333333"
      p.stroke do
        p.rectangle(p.bounds.top_left, p.bounds.width, p.bounds.height)
      end
    end
  end

  p.define_grid(:columns => 5, :rows => 8, :gutter => 10)

  p.grid.show_all

  [
    p.grid(0,4),
    p.grid([0,0], [1,1]),
    p.grid([3,0], [3,3]),
    p.grid([5,1], [4,0])
  ].each {|g| draw_box(p, g)}
end
```

0,0:1,1	0,1	0,2	0,3	0,4
1,0	1,1	1,2	1,3	1,4
2,0	2,1	2,2	2,3	2,4
3,0:3,3	3,1	3,2	3,3	3,4
4,0:4,0	4,1	4,2	4,3	4,4
5,0	5,1	5,2	5,3	5,4
6,0	6,1	6,2	6,3	6,4
7,0	7,1	7,2	7,3	7,4

Single box

Multi box

Backward box

Just acts as a bounding box

Prawn Grid

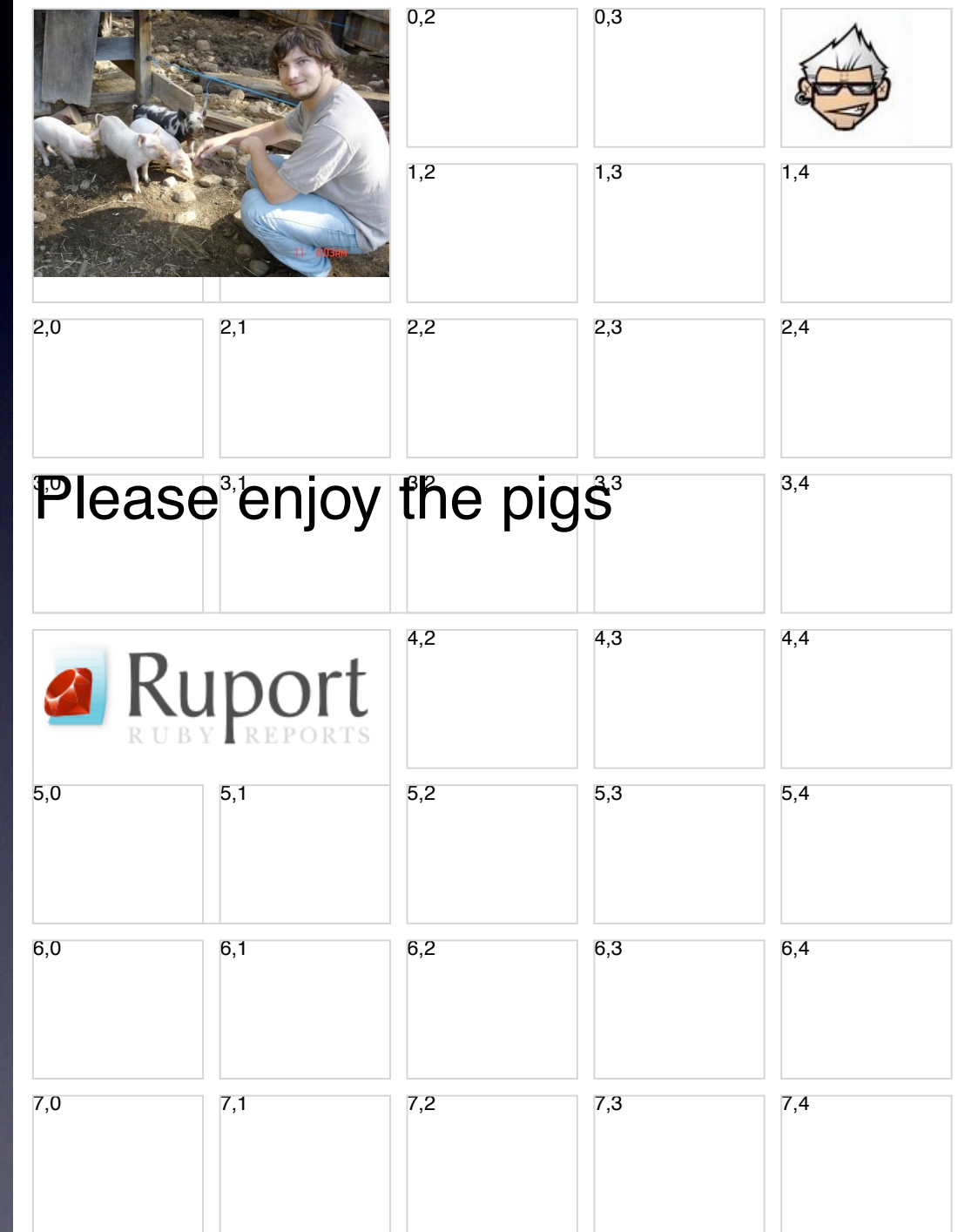
```
Prawn::Document.generate('example2.pdf') do |p|
  p.define_grid(:columns => 5, :rows => 8, :gutter => 10)
  p.grid.show_all

  p.grid([0,0], [1,1]).bounding_box do
    p.image "pigs.jpg",
      :fit => [p.bounds.width, p.bounds.height],
      :position => :left, :vposition => :top
  end

  p.grid(0,4).bounding_box do
    p.image "stef.jpg",
      :fit => [p.bounds.width, p.bounds.height],
      :position => :left, :vposition => :top
  end

  p.grid([3,0], [3,3]).bounding_box do
    p.text "Please enjoy the pigs", :size => 36
  end

  p.grid([5,1], [4,0]).bounding_box do
    p.image "ruport.png",
      :fit => [p.bounds.width, p.bounds.height],
      :position => :left, :vposition => :top
  end
end
```



The Future

CSS3 Advanced Page Layout work-alike

```
<style type="text/css">
  dl { display: "aab"
        "cdd" }
  #sym1 { position: a }
  #lab1 { position: b }
  #sym2 { position: c }
  #lab2 { position: d }
</style>
<dl>
  <dt id=sym1>A
  <dd id=lab1>A is een aapje
  <dt id=sym2>B
  <dd id=lab2>B is de bakker
</dl>
```

```
Prawn::Document.generate(file_path) do |p|
  p.define_grid(:columns => 5, :rows => 8, :gutter => 10,
    :layout => [
      "a a", (0,0),(0,1)
      "",
      "",
      "b b b", (3,0),(3,2)
      "_ foo foo", (4,1),(5,2)
      "_ foo foo",
    ])

  [:a, :b, :foo].each {|key| draw_box(p.grid(p, key))}

  def draw_box(p, g)
    g.bounding_box do
      p.text g.name
      p.stroke_color = "333333"
      p.stroke do
        p.rectangle(p.bounds.top_left, p.bounds.width, p.bounds.height)
      end
    end
  end
end
```

Not yet implemented

Able to better withstand changes in number of columns and rows

Further Resources

- Prawn: <http://github.com/sandal/prawn/tree/master>
- Prawn Grid: http://github.com/AndrewO/prawn_grid/tree/master
- Mark Boulton: *5 Simple Steps to Designing Grid Systems* http://www.markboulton.co.uk/journal/comments/five_simple_steps_to_designing_grid_systems_part_1/
(a way better grid system and explanation)
- Khoi Vinh & Mark Boulton: *Grids are Good (Right)?* http://www.subtraction.com/pics/0703/grids_are_good.pdf
- CSS Advanced Layout Module: <http://www.w3.org/TR/css3-layout/>