

**geeCON 2013**

# Paths to Innovation

## A Prototyping Intro

**Patrick Copeland**

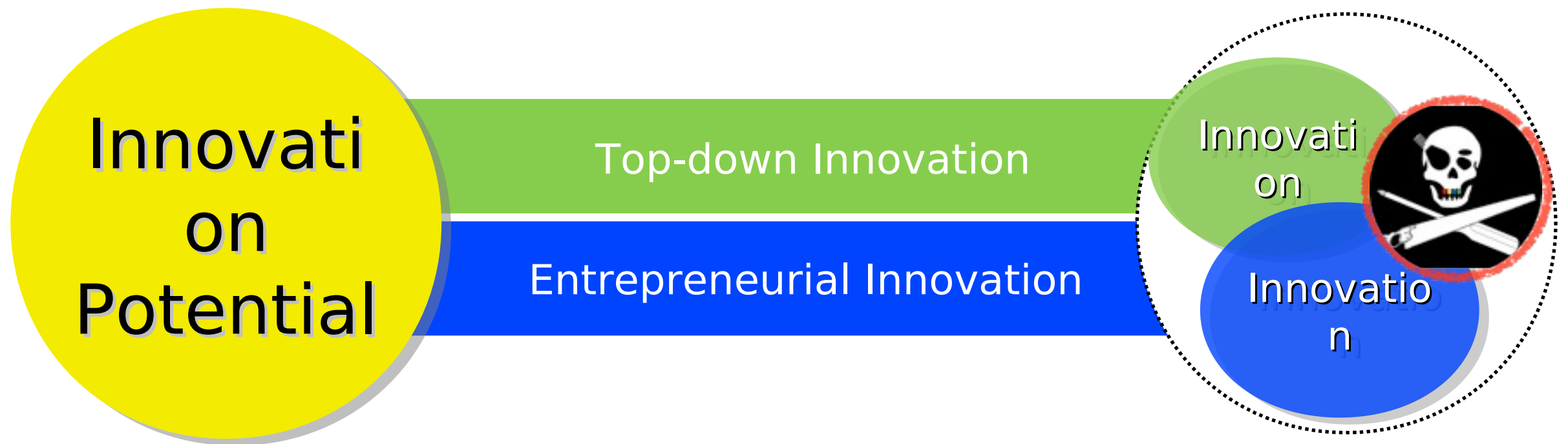
Senior Engineering Director, Google

[patrickcopeland.org](http://patrickcopeland.org)

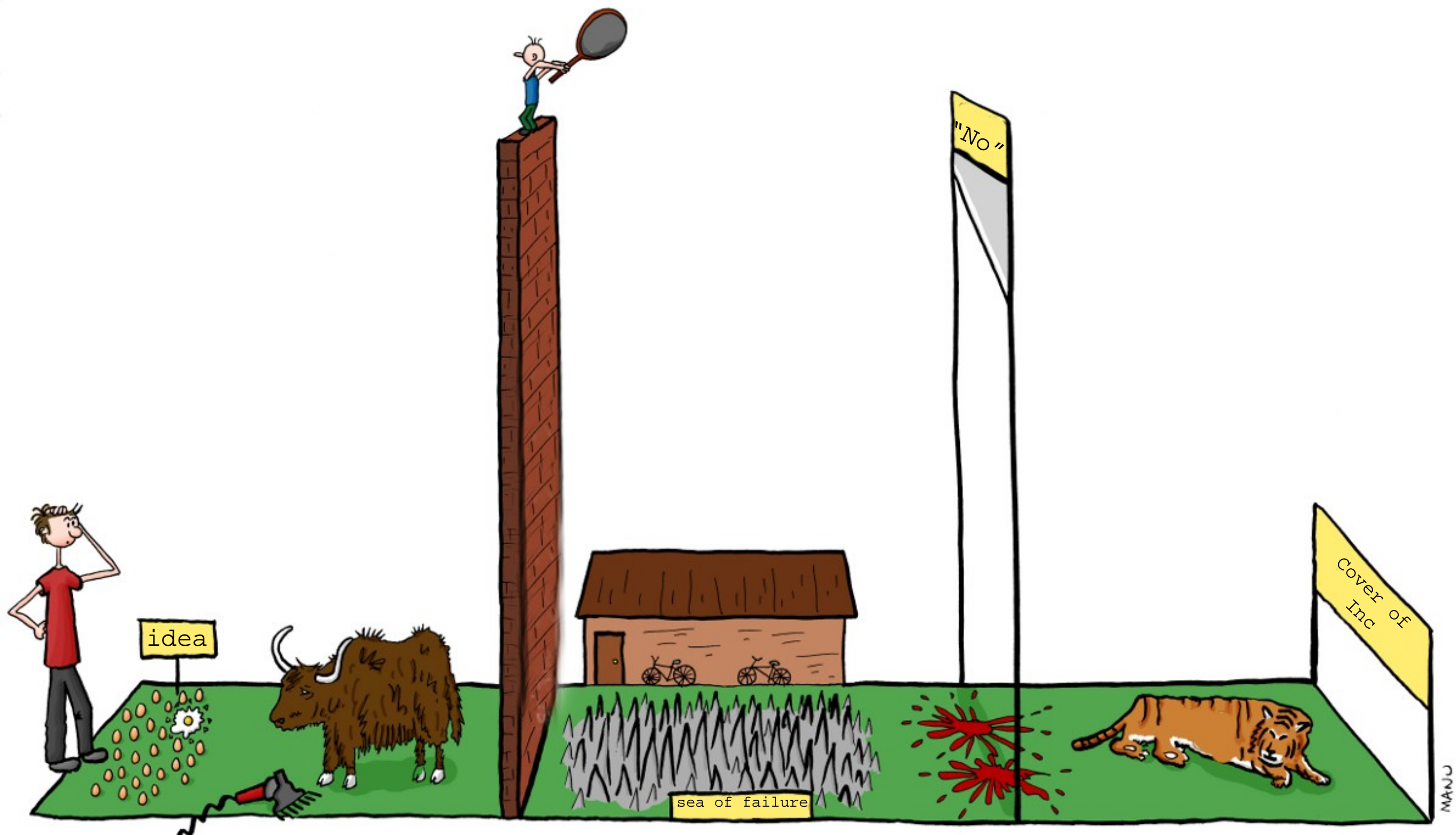
[@copelandpatrick](https://twitter.com/copelandpatrick) [#pretotyping](https://twitter.com/pretotyping)



# Lost In Translation







# The Law of Failure

**Most new ideas fail**

...

>95% of all mobile apps don't make money

4 out of 5 startups lose investor money

Most innovative technologies fail in the  
market

...

# The Law of Failure

**Most new ideas fail**

**even if they are very well executed**

# Pretotyping

Make sure you  
are building the  
right '*it*'  
before you  
build '*it*'  
right.

*it*

*innovative* *technology*

*idea* to *try*



You  
can't  
escape

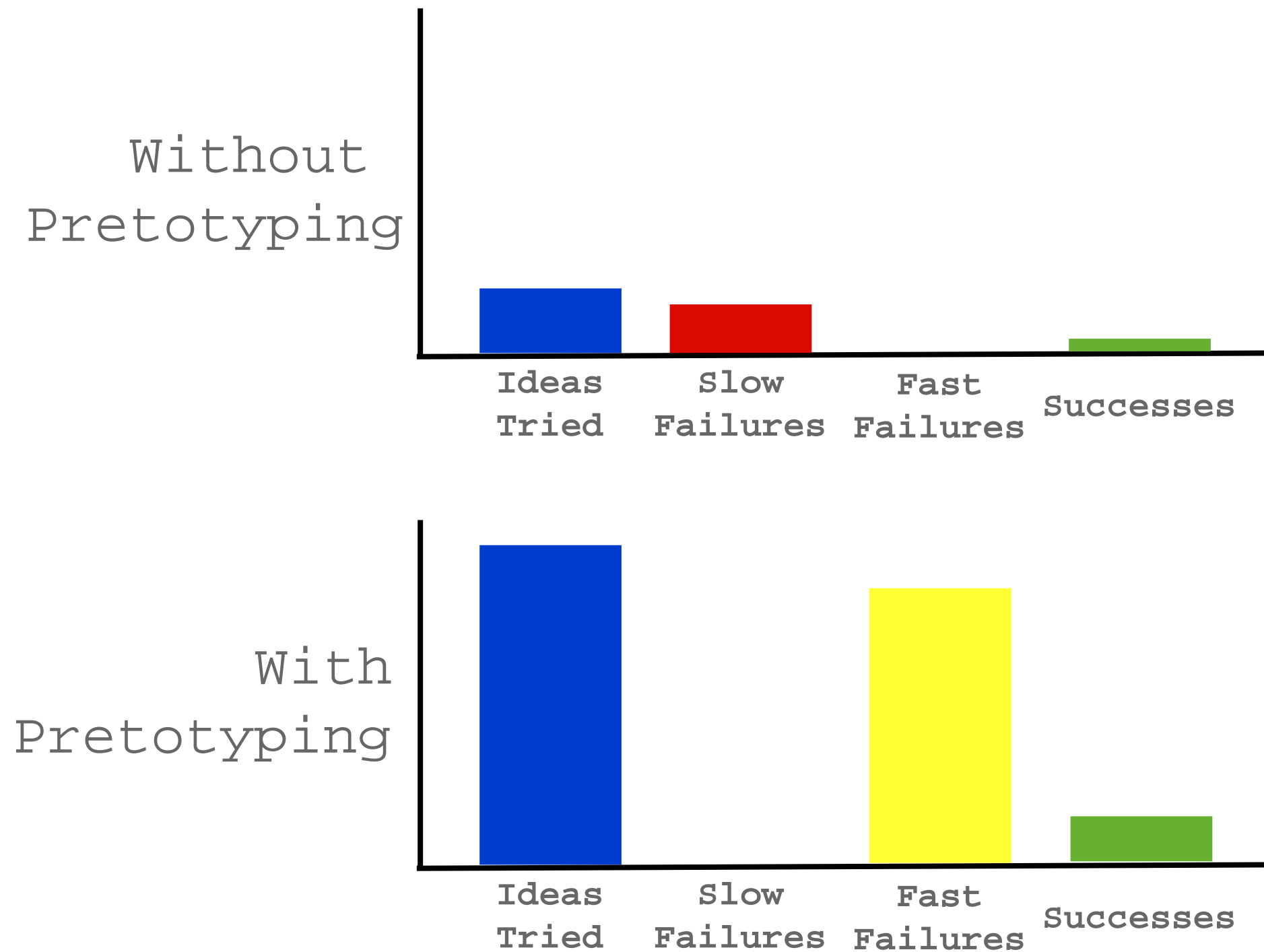
*The Law of Failure*

...

...

but you  
can use it  
to your  
advantage.

# The Pretotyping Effect



# the pretotyping manifesto

innovators beat ideas

pretotypes beat productypes

data beats opinions

doing beats talking

simple beats complex

now beats later

commitment beats committees

# Ideas, ideas, ideas ..

*"We need some innovative **ideas**!"*

*"Where's the next billion dollar **idea**?"*

*"I have an **idea** that will change the world!"*

**\$ value of  
ideas?**



I am no  
Steve Jobs  
but ...

# Patrick's \$B idea



Bidding starts at 3000 zł

Price is for idea only. There is no explicit or implicit offer of help to implement the idea. The idea may not be implemented in a cost-effective way - possibly not at all. The seller of the idea *believes* that the idea is a good one, but cannot guarantee its success. Since we don't know all the ideas that have been thought, the originality of this idea cannot be guaranteed; it's very possible that other people have had this idea. This idea is non-returnable and the sale is final. No credit or refunds will be issued.

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[SF bay area craigslist](#) > [san francisco](#) > [resume](#) > [resumes / job wanted](#)

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## Ideator for hire. \$10 per idea. (pacific heights)

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Date: 2010-04-03, 10:19AM PDT

[Reply To This Post](#)

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People are always telling me I have fantastic business ideas. Some of them have been turned into VC-funded companies and I have already 3 patents to my name.

In the past I've worked hard to turn ideas into products, but now I just want to focus on generating ideas.

For just \$10/idea I will provide you with new business ideas. You can even tell me what type of ideas you want.

Here are some of the categories where I already have some great ideas:

- iPod or iPad applications
- Games (electronic or board)
- Electronic devices and Gizmos (the next iPad or iPod, electronic guitar, virtual pets)
- Collector items (things similar to Beanie Babies, Pez dispensers, etc.)
- Marketing or advertising ideas.
- Many more

\$10/idea is my introductory pricing. After that, I will probably raise my prices to \$20/idea.

If you need some fresh ideas, I am the man for you.

If you are interested, please send me an email with a phone number.

- it's ok to contact this poster if you are a potential employer or other principal
- Principals only. Recruiters, please don't contact this job seeker.
- it's NOT ok to contact this poster with services or other commercial interests



An even **bigger** problem  
with ideas ...

Opinion

Idea

Opinion

Opinion

Welcome to  
**Thoughtland**

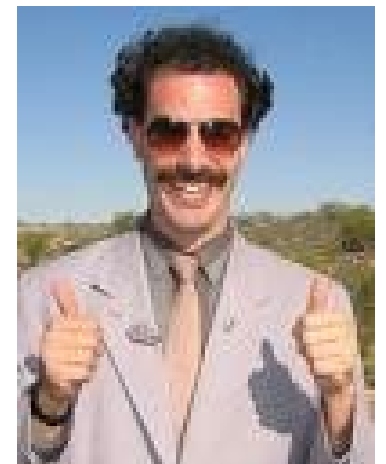
Pop. ∞



# Thoughtland

*Where every idea can be a winner!*

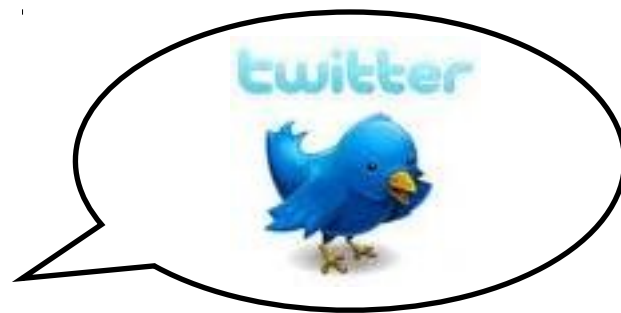
*False positive*



# Thoughtland

*Where every idea can be a loser!*

False Negative



# Thoughtland

*Where every idea needs to fit in!*

*community Break*





??????

It's hard to tell the  
difference between...

**Good vs Lucky**

**Bad vs Unlucky**

# Ditch on both sides of the road

That's  
dumbest/best  
idea I've  
ever heard



Let's test  
500 shades  
of blue





If you want innovation,  
**don't look for ideas**  
**look for innovators**

# How Do You Find Innovators?



# Spot the Innovator



SALE  
50% off

Great idea from Patrick



Now only  
**1500 zł**

Bidding starts at ~~3000 zł~~

# the pretotyping manifesto

innovators beat ideas

pretotypes beat producttypes

data beats opinions

doing beats talking

simple beats complex

now beats later

commitment beats committees

# The Innovator's Nightmare

Spending years and millions,  
to build and perfect  
a product or service  
that people don't need  
or want.



# Product types?



Google wave



Google™  
Answers  
Ask a question. Set your price. Get your answer.

More than 500 carefully screened Researchers are ready to answer your question for as little as \$2.50 – usually within 24 hours. Your satisfaction is completely guaranteed. Find out [what others are saying](#).

[Log in or Create a Google Account](#)

Step 1 - Enter your Question. [Tips for great results.](#)

Can you  
avoid the  
innovator's  
nightmare?

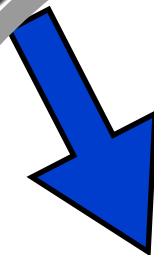
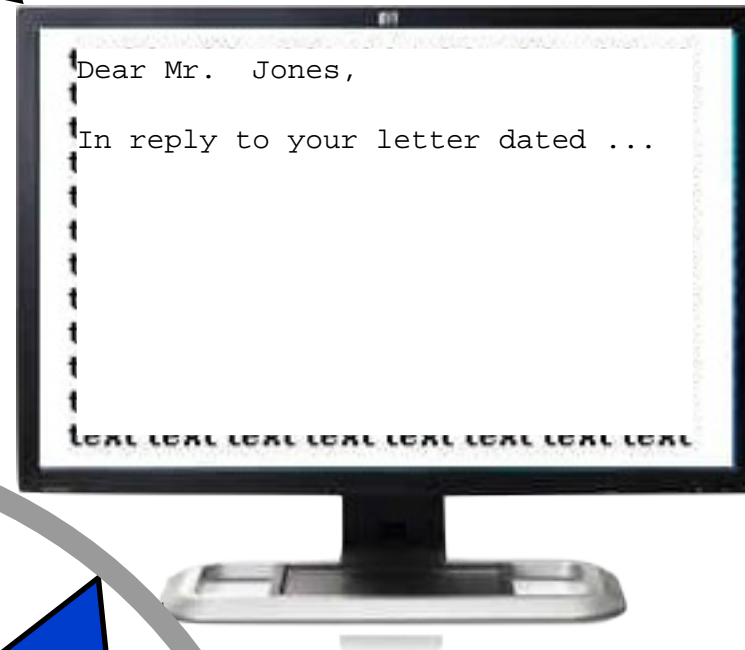
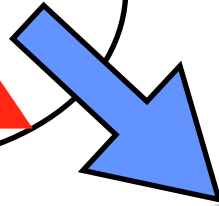
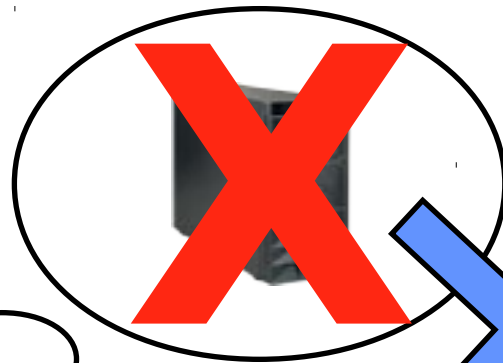
**Yes!**

With Pretotyping

***Pretotyping*** [pree-tuh-tahy-ping] ,  
verb: Validating the **market  
appeal and actual usage** of a  
potential new product by  
simulating its core experience  
**with the smallest possible  
investment** of time and money.

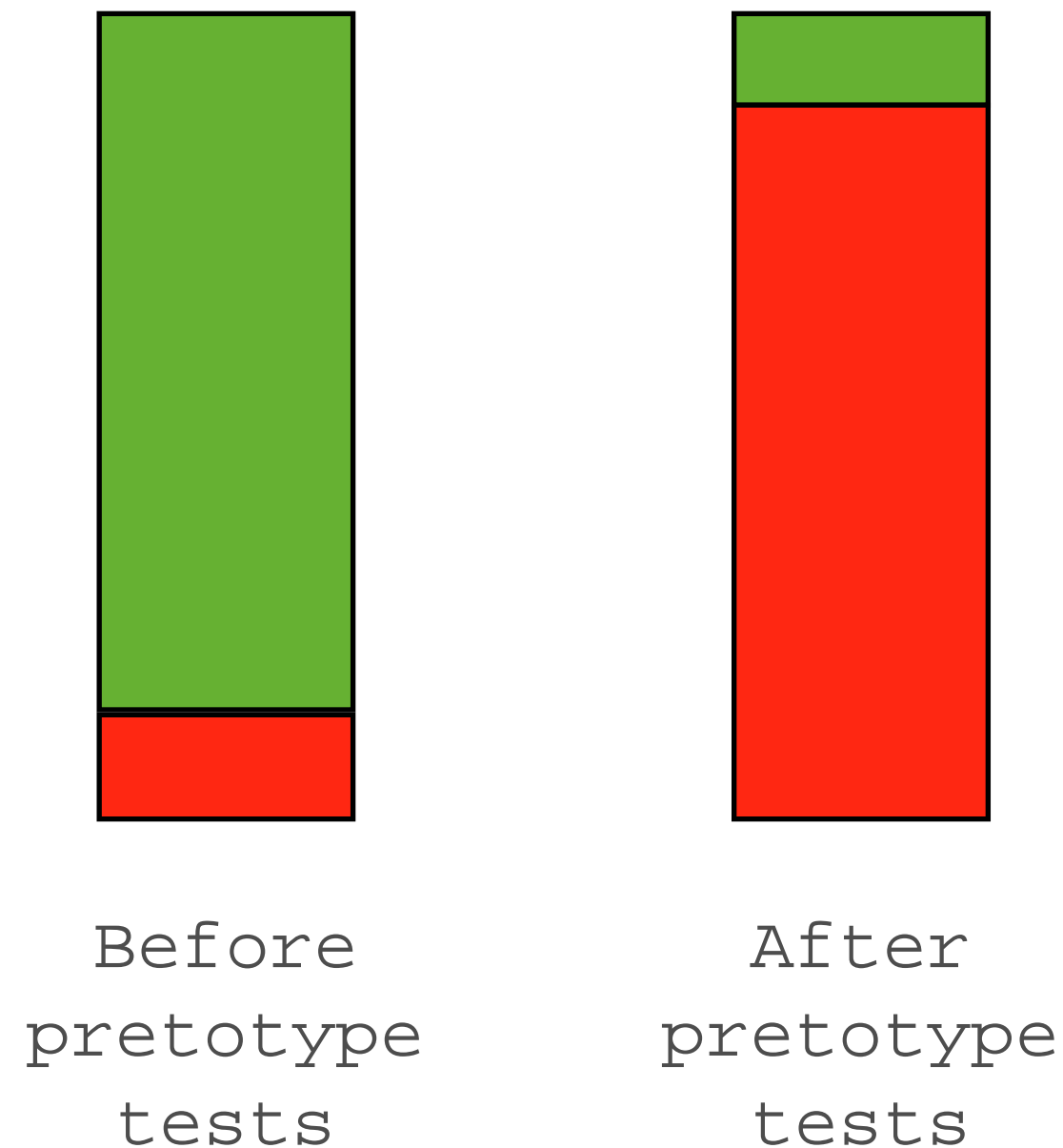
# IBM & Speech-to-Text Technology





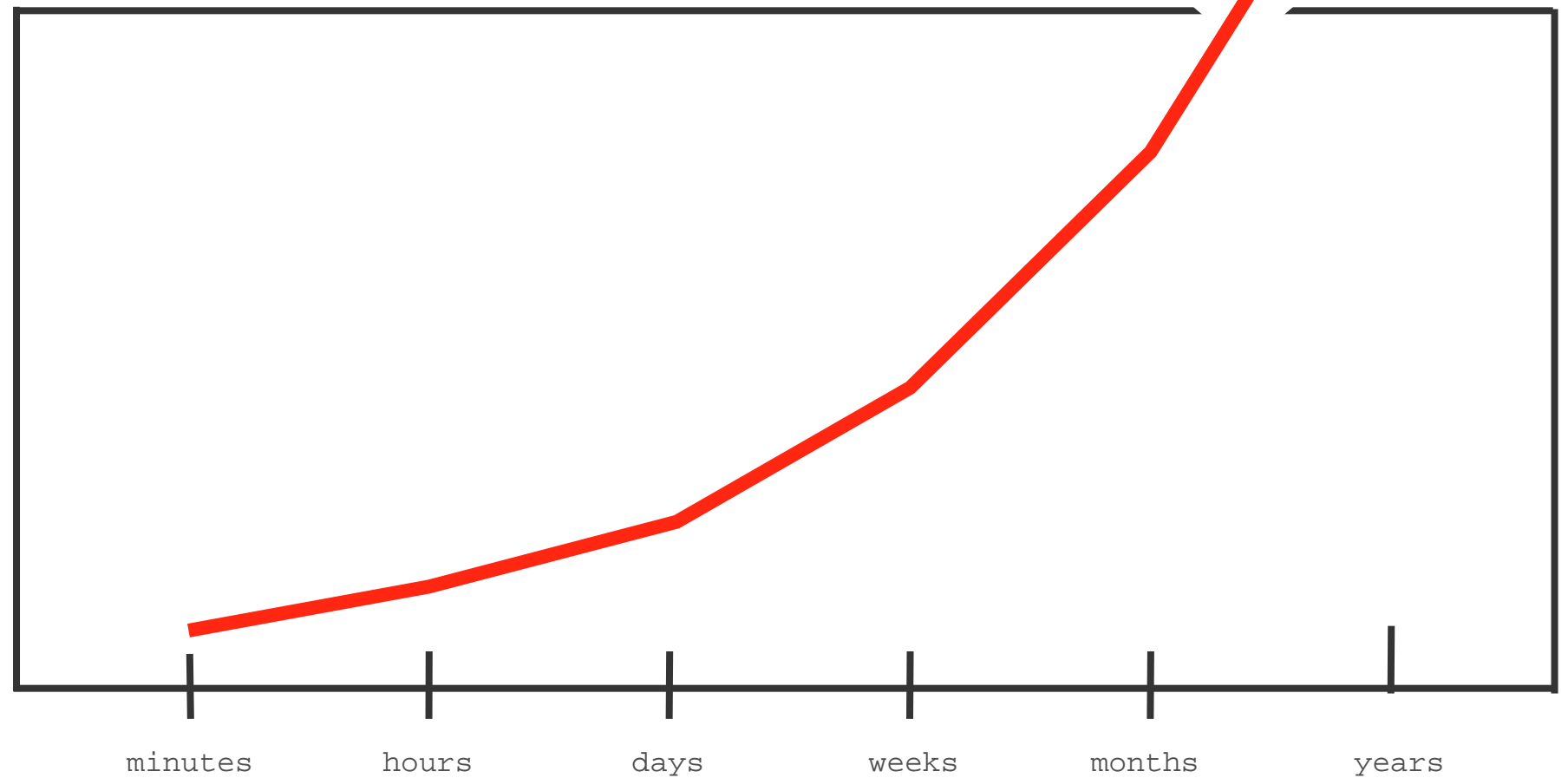
Pretendotype  
Pretotype

“We love the *idea* of speech-to-text  
and we’ll pay big \$ for it  
if you can built *it* right.”



# Fail Fast

Compulsion to  
keep going  
at all costs



Time Invested



# The Original Palm "Pre"



# Pretotyping

*Fake it before you make it*

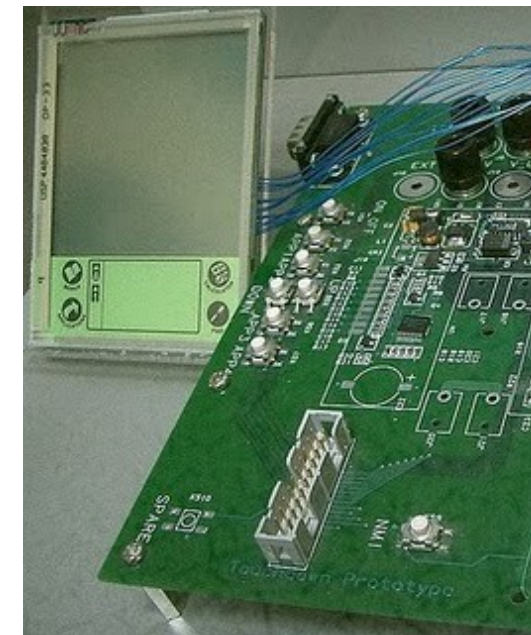
## Pretotyping

- **Investment:** hours, days
- **Answers:** Would we use it?
- **Launch:** [Working] pretotype



## Prototyping

- **Investment:** days, weeks
- **Answers:** Can we build it?
- **Launch:** Working prototype



# the pretotyping manifesto

innovators beat ideas

pretotypes beat producttypes

data beats opinions

doing beats talking

simple beats complex

now beats later

commitment beats committees

# Are you on the right track?

(i.e. building the right 'it')

## Credibility

Usage data

High

Pretotype  
Prototype

Med

Idea

Low

# HIT or FLOP

F.L.O.P.

Failure in

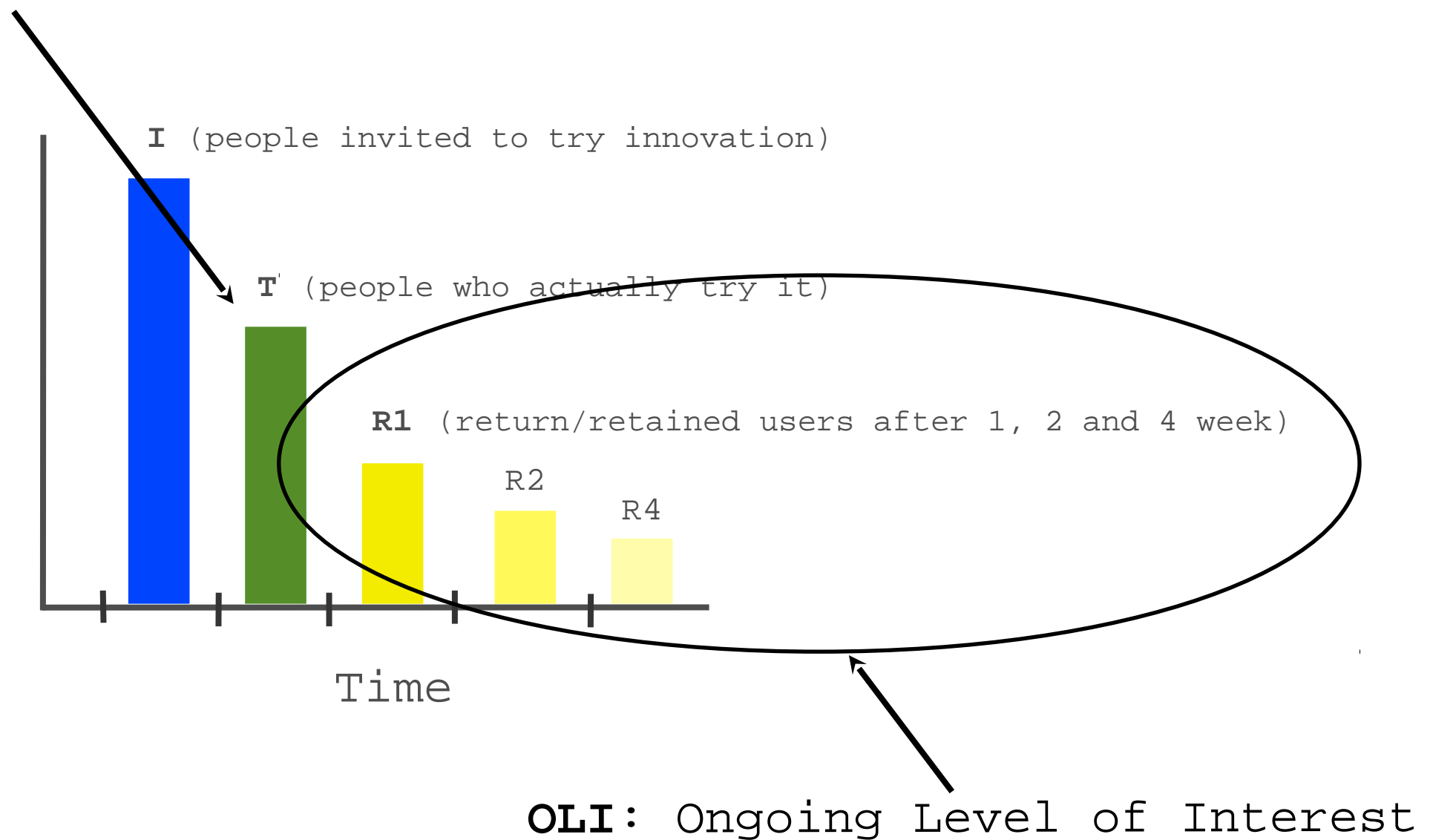
Launch

Operations or

Premise

# HIT or FLOP

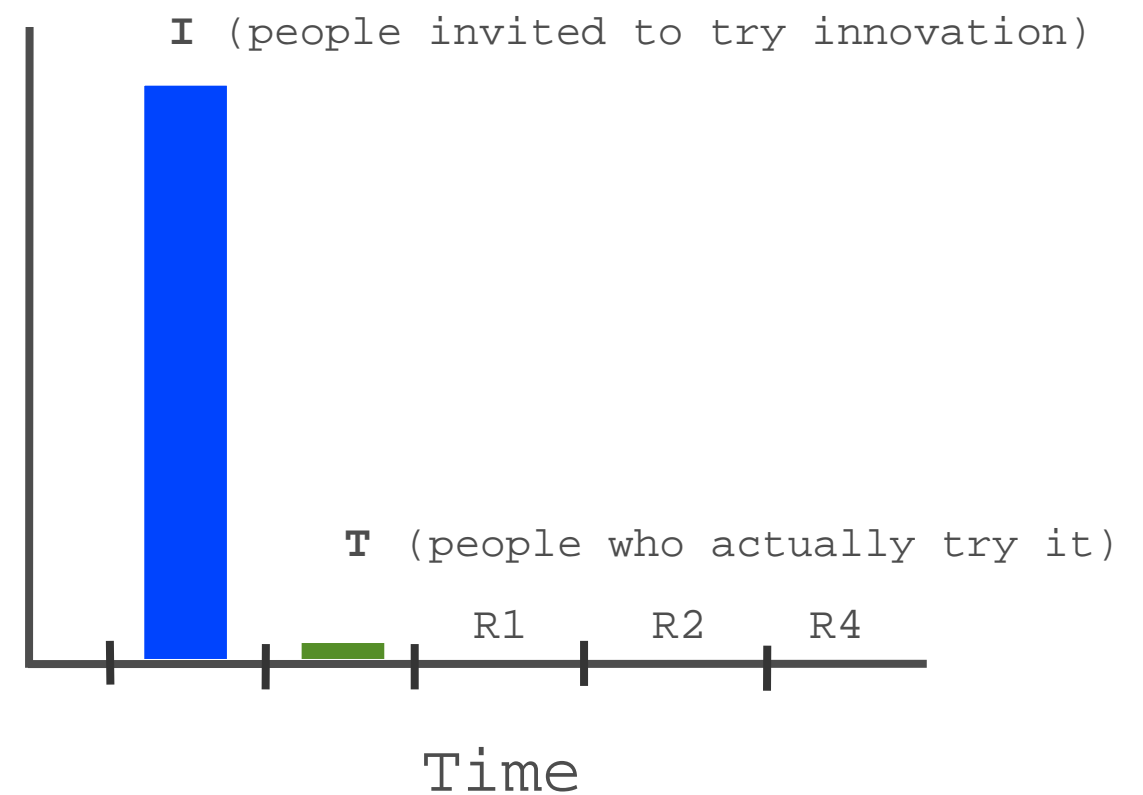
**ILI:** Initial Level of Interest



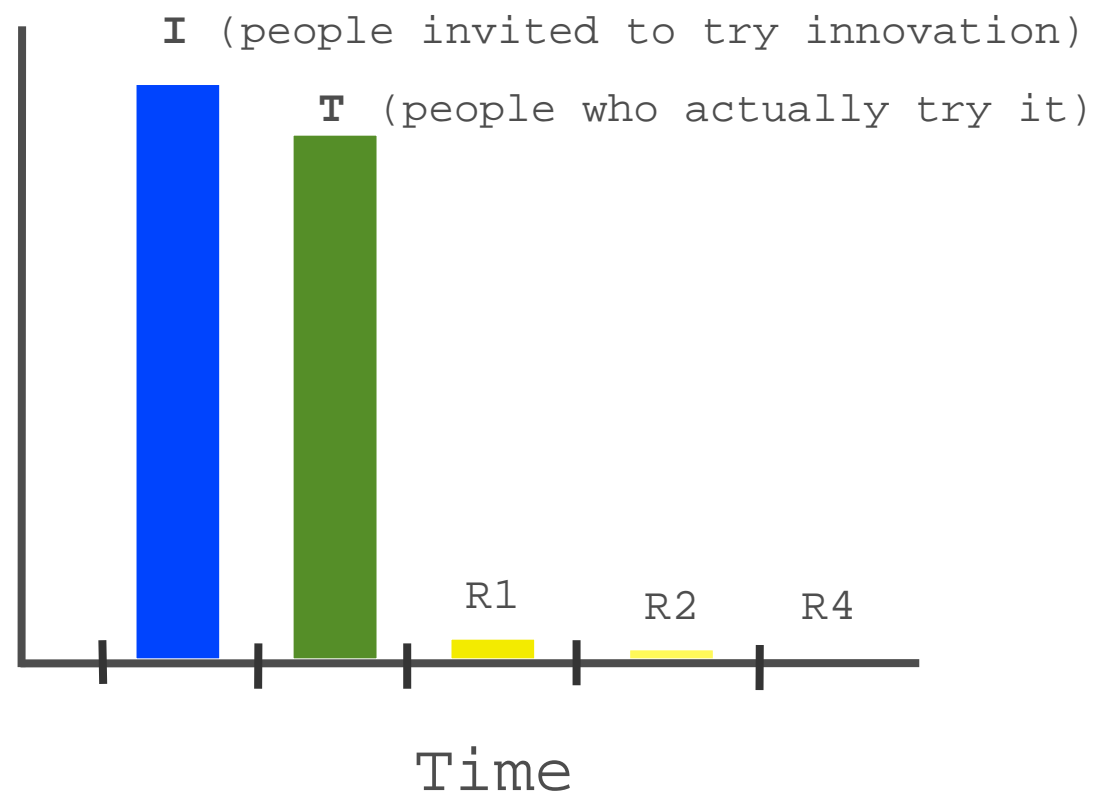
# FLOP



Opinions from  
Thoughtland



# FLOP

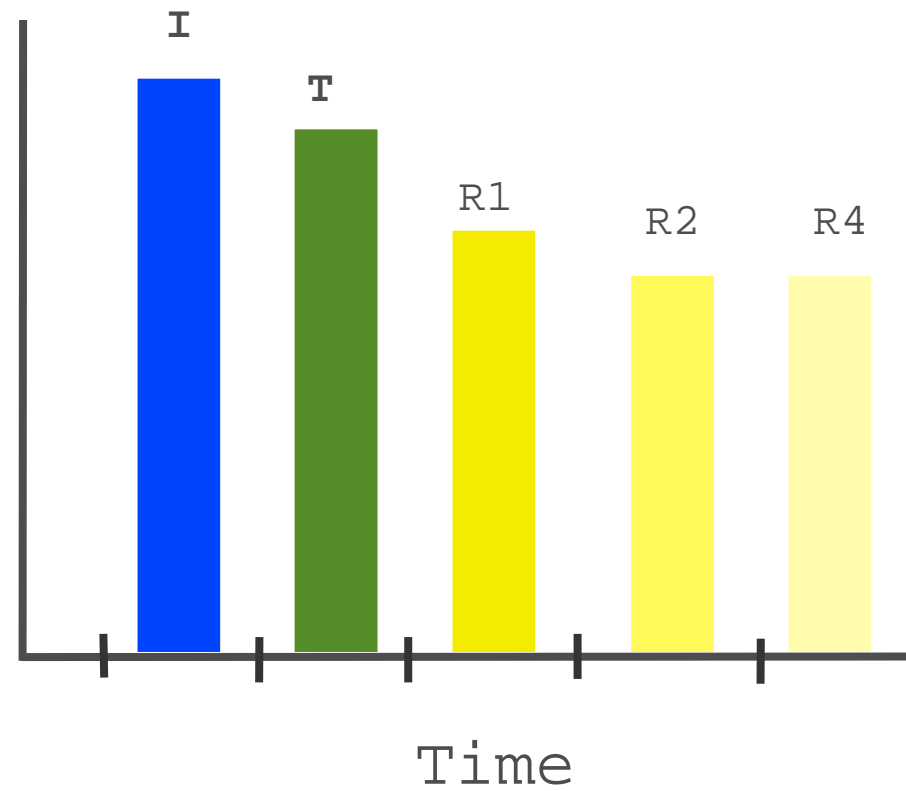




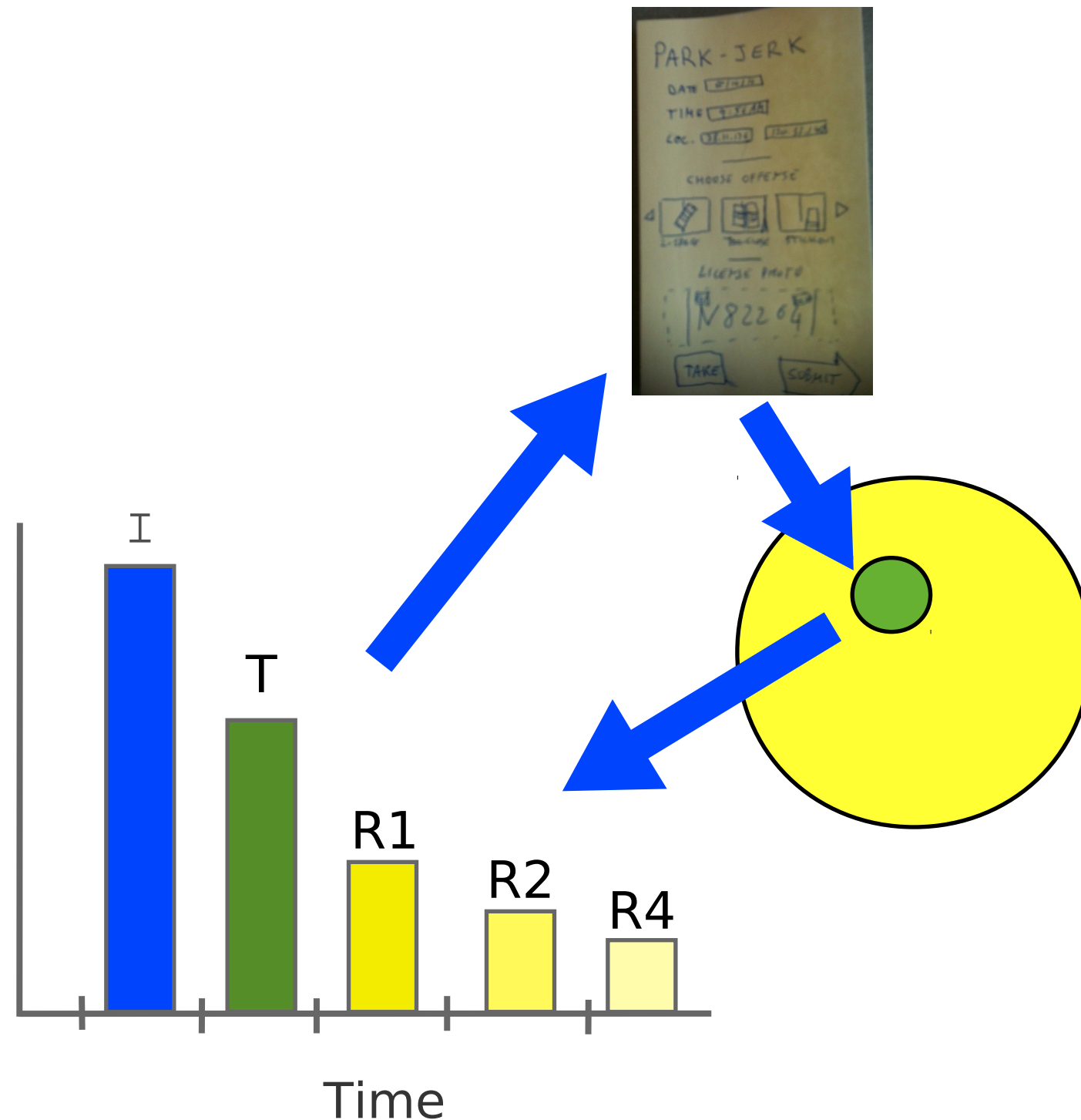
# HIT



twitter



# Run multiple experiments with small subsets of target population



# Pretotyping in Action

Mobile Apps

# *Papertyping*

## *The Birth of Android Pretotyping*





# Androgen


Pretotype working Android  
apps in minutes

Chrome File Edit View History Bookmarks Window Help

Google.c x M 0 (4320) x M 0 (4320) x Google x Google.c x HCL HCL : Inc x Google x [w] Main . Pi x Google x

suhlertest.appspot.com/androgen-ide.bsl

Mercato WMail PMail News FaceMe GenQR Google.com Mail - B SBarney Yearbook Google Hotpot Mercat

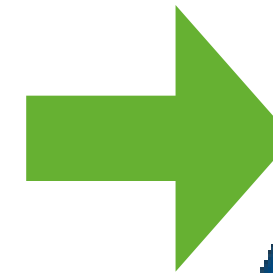
 **Androgen IDE\***

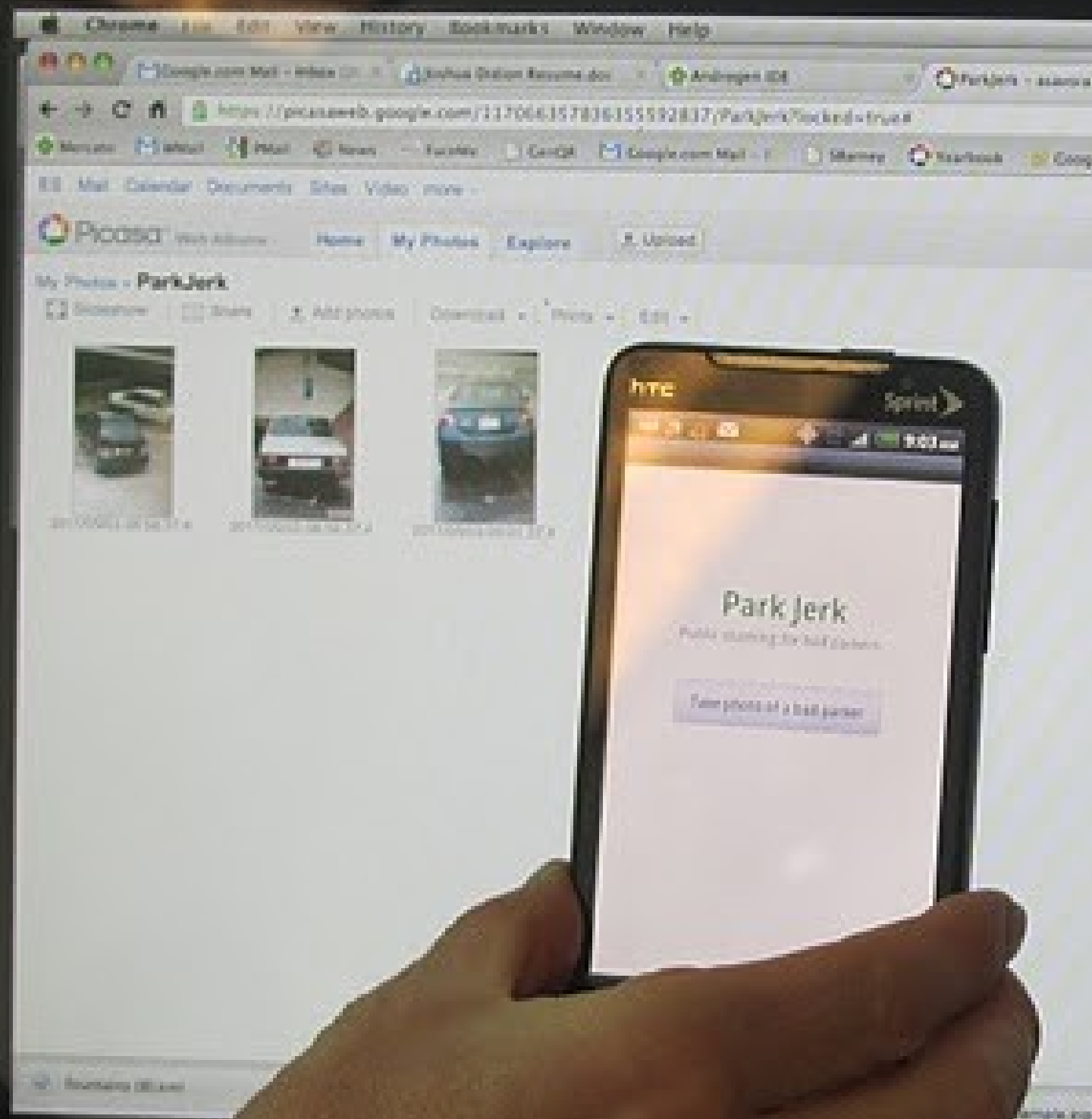
userID: asavoia ( [Chart](#) | [Photos](#) | [Reload](#) | [Help](#) | [Samples](#) | [Published apps](#) )

choose a ".aml" file  OR choose a data file  weight.aml

```
<reset/>
<view text="My Weight" scale=30 >
<label row=next text="\n\nEnter your weight:" >
<entry row=next name=myWeight >
<button row=next text="Send" action=logIt >
<action name=logIt>
  <store csv="{date()}, ${myWeight.text}" >
</action>
```

[edit table](#)





# Pretotyping in Action

Retail Service





TECHNOLOGY  
**TRADE IN**  
AT **BEST BUY**





TECHNOLOGY  
**TRADE-IN**

AT

**BEST  
BUY**

**My eBay** - Hello [nextplayelectronics](#) (0) 🕶️

[Bidding/Watching](#)[Selling](#)[Favorites](#)[Accounts](#)[Feedback](#)[Preferences](#)

Go to: [Items I'm Selling](#) | [Items I've Sold](#) | [Unsold Items](#) | [Pending Items](#) **NEW!**

## Items I'm Selling (60 Items)

✓ = Items that will sell when the auction ends    ✗ = Items that haven't sold yet  
Multiple Item Auctions (Dutch Auctions) do not use color coding.

<a href="#">Item #</a>	<a href="#">Start Price</a>	<a href="#">Current Price</a>	<a href="#">Reserve Price</a>	<a href="#">Qty Available</a>	<a href="#"># of Bids</a>
<a href="#">Super Mario 64 - Nintendo 64 Game</a>					
1943400337	\$1.00	\$15.50 ✓	n/a	1	12
<a href="#">Super Mario 64 - Nintendo 64 Game</a>					
			n/a	1	13





TECHNOLOGY  
**TRADE◀IN**  
AT **BEST BUY**



Make sure you are  
building the right thing  
before you invest a lot in  
building it right.

# Pretostorming

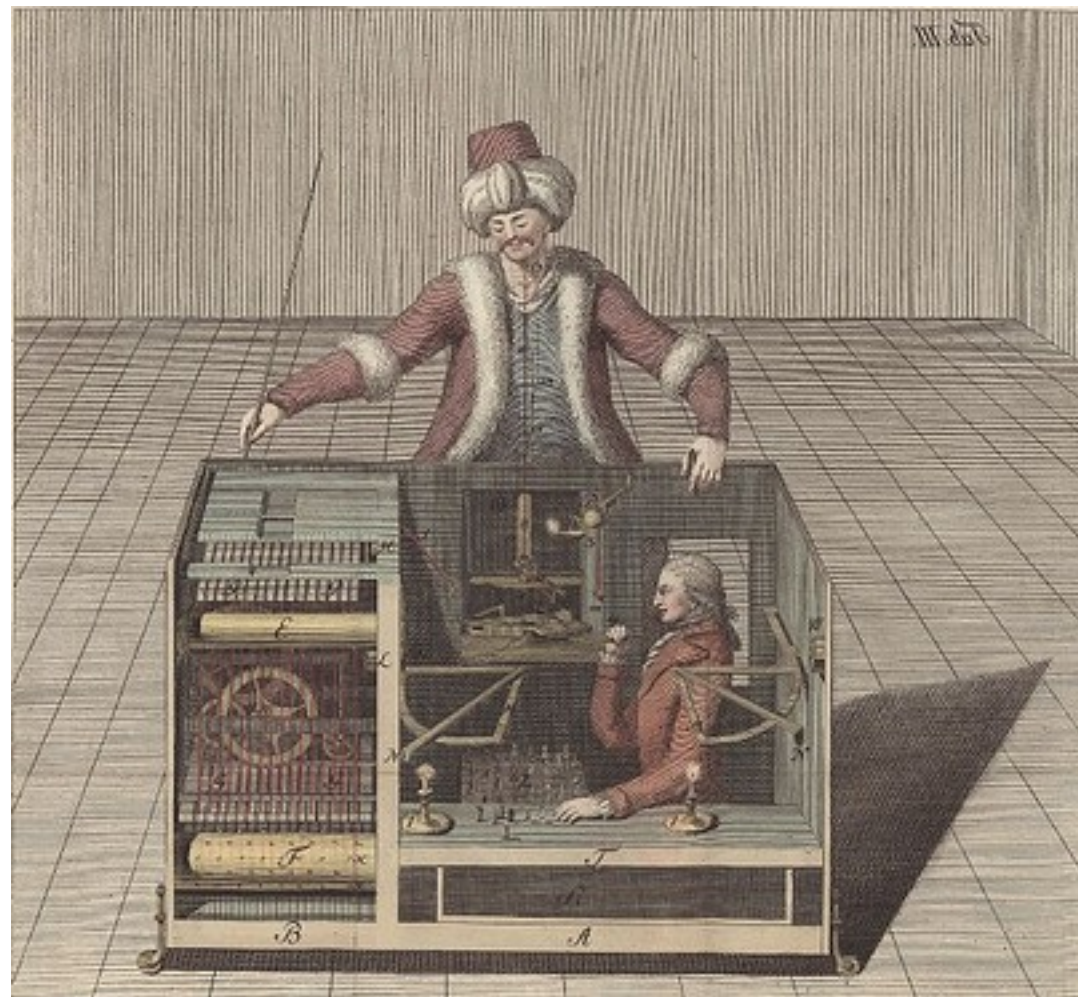
aka "Hack-a-thon"

Brainstorming : Ideas -> Opinions

Pretostorming : Pretotypes -> Data

# A Sampling of Pretotyping Techniques

# Mechanical Turk Pretotypes





# Pinocchio

## Pretotypes



COURTESY PALM

# The Fake Door Pretotypes

Fresh Local Eggs

[localYolks.com](http://localYolks.com)

From our yard to your table

Only \$7/dozen

# One-Night Stand Pretotypes



# Impersonator Pretotypes





# Product types?



Google wave



Google™  
Answers  
Ask a question. Set your price. Get your answer.

More than 500 carefully screened Researchers are ready to answer your question for as little as \$2.50 – usually within 24 hours. Your satisfaction is completely guaranteed. Find out [what others are saying](#).

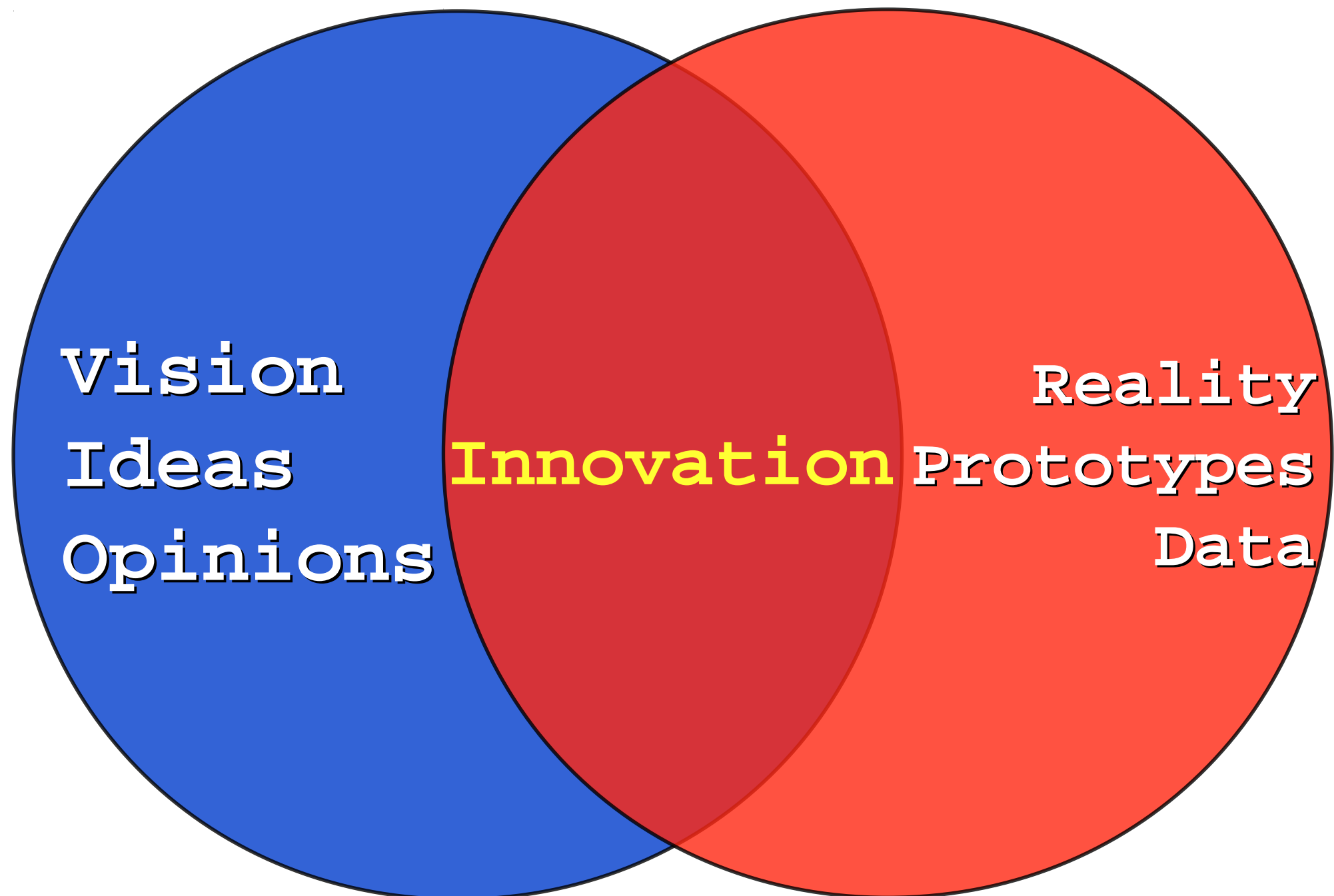
[Log in or Create a Google Account](#)

Step 1 - Enter your Question. [Tips for great results.](#)

# Pretostorming Exercise



# Vision vs. Hallucination



Ok, ok, but can anyone do  
this? At any stage? In any  
market condition?



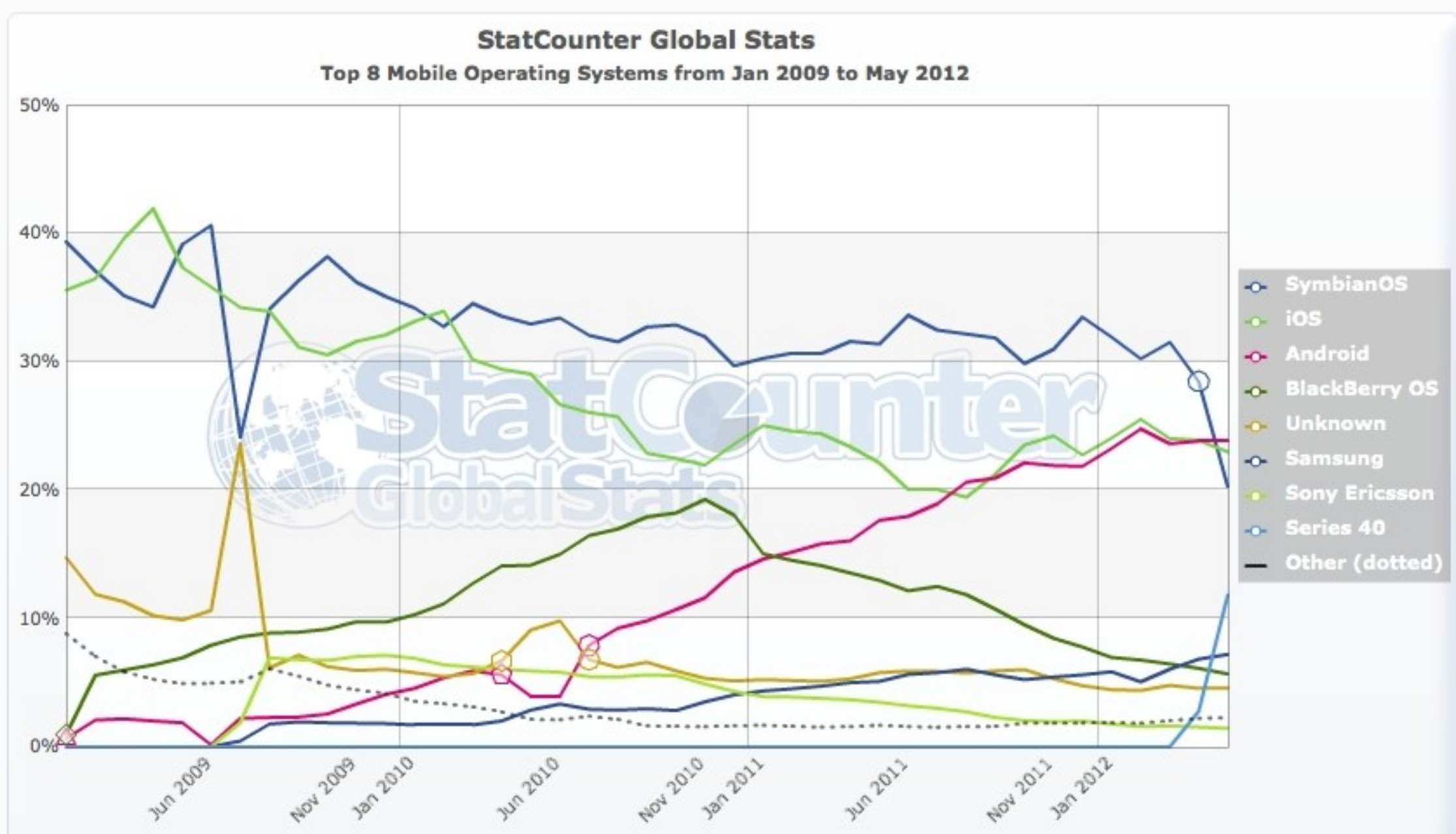
# Clone Wars

Then: Mainframe vs PC clones



# Clone Wars

Now: Android



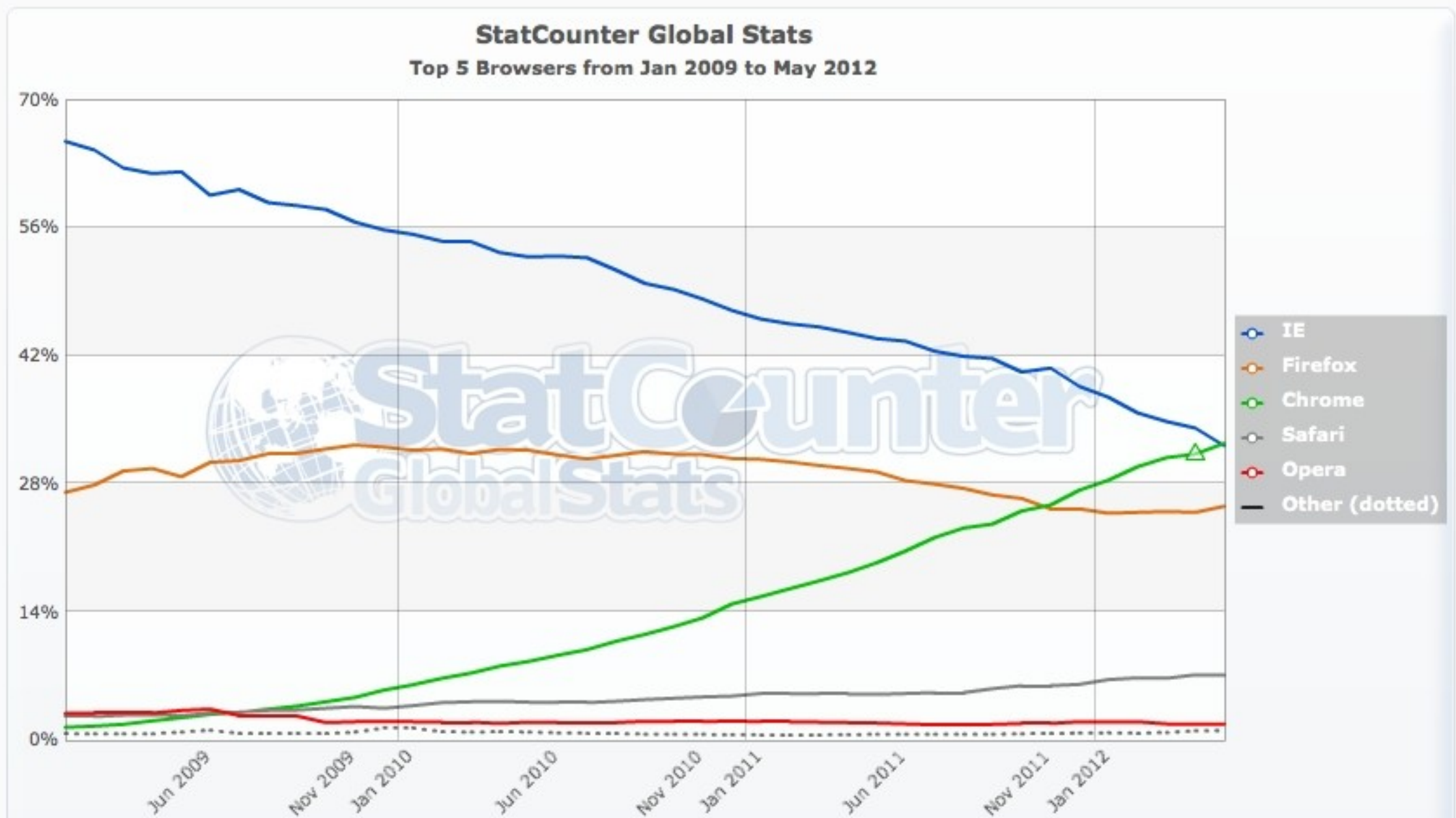
# Fast Following

Then: Lotus Notes vs Office



# Fast Following

## Now: Chrome



# Unique Advantage

Then: AT&T vs Sprint

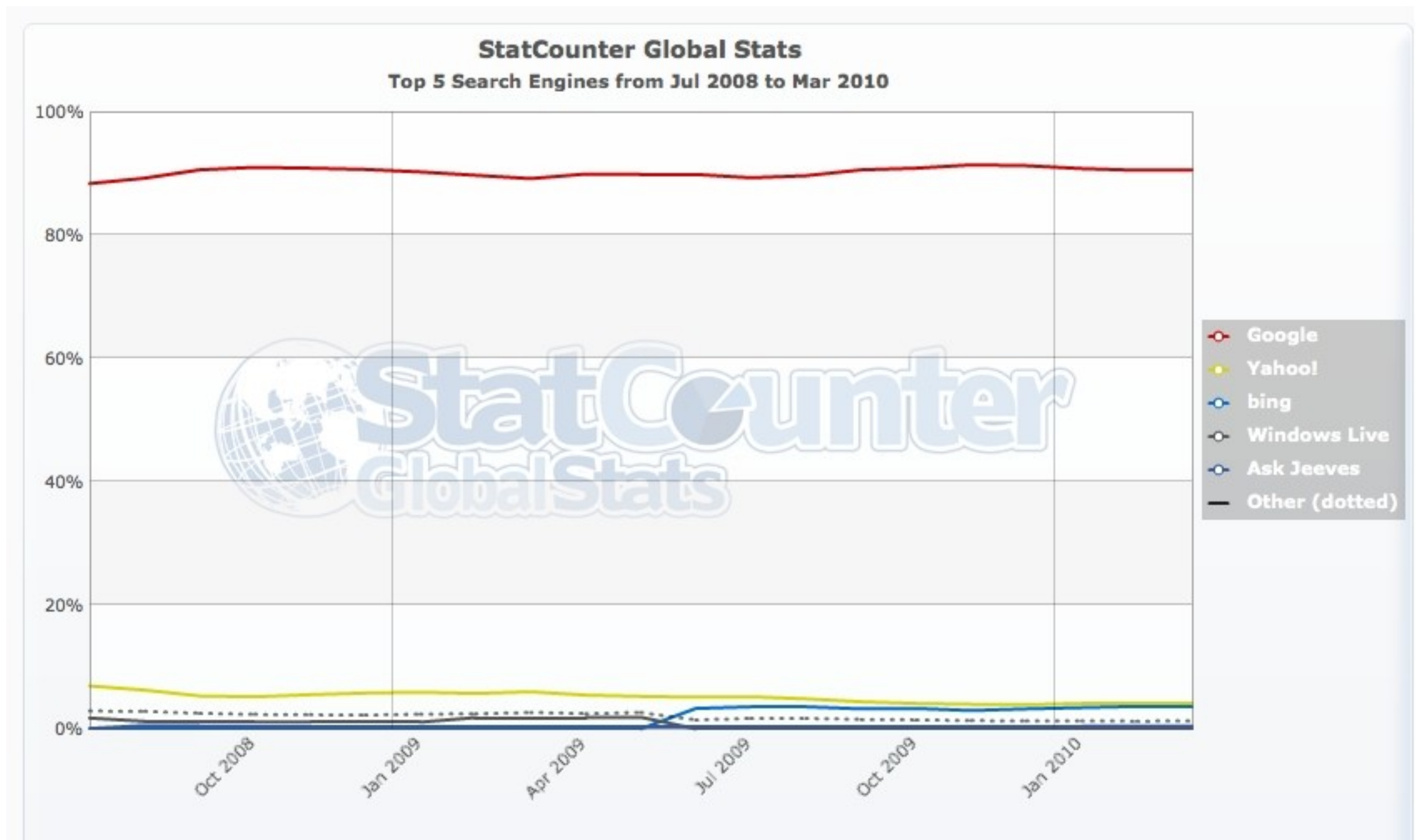


**AT&T**



# Unique Advantage

Now: Google Search





**SALE**  
Last offer

Great idea from Patrick



Now only  
**60 zł**

Bidding starts at ~~3000 zł~~

# Iterate early & often

Invent.

Test.

Test.

Test.

Repeat.





# the pretotyping manifesto

innovators beat ideas  
pretotypes beat productypes  
data beats opinions  
doing beats talking  
simple beats complex  
now beats later  
commitment beats committees

Go forth and  
Pretotype!

**Patrick Copeland**

Senior Engineering Director, Google

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[@copelandpatrick #pretotyping](#)