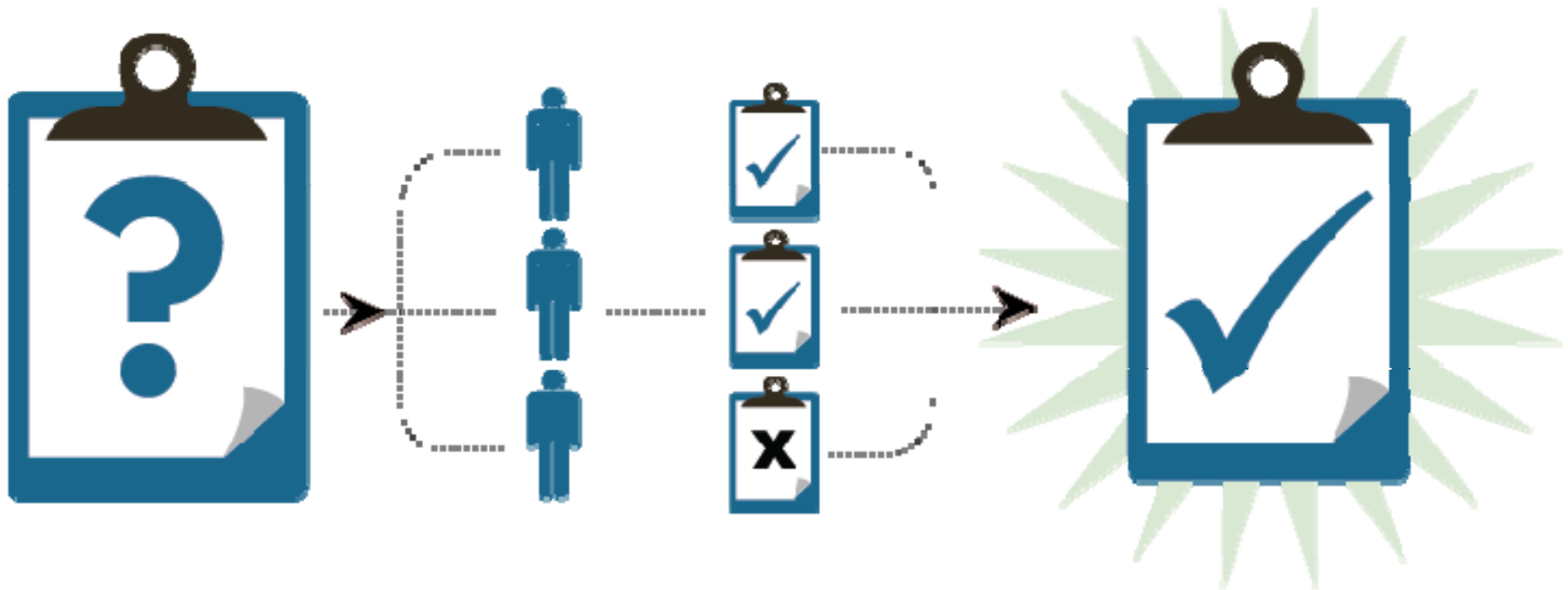


CrowdFlower

Chris Van Pelt
Co-Founder & CTO

Distributed Human Computing



2.5 Million Contributors

[Big data - Wikipedia, the free encyclopedia](#)

en.wikipedia.org/wiki/Big_data

In information technology, **big data** consists of datasets that grow so large that they become awkward to work with using on-hand database management tools.

↳ [Definition](#) - [Examples](#) - [Technologies](#) - [Impact](#)

[Big data: The next frontier for innovation, competition, and ...](#)

www.mckinsey.com/.../Big_data_The_next_frontier_for_innovation

A McKinsey & Company Technology & Innovation article.

[IBM What is big data? – Bringing big data to the Enterprise](#)

www.ibm.com/software/data/bigdata/

Everyday, we create 2.5 quintillion bytes of **data**—so much that 90% of the **data** in the world today has been created in the last two years alone. This **data** comes ...

[bigdata® - SYSTAP, LLC](#)

www.systap.com/bigdata.htm

Bigdata® is a horizontally scaled storage and computing fabric supporting optional transactions, very high concurrency, and very high aggregate IO rates.

[bigdata blog](#)

www.bigdata.com/blog/

Mar 22, 2012 – **Bigdata** uses a vectored query engine. Chunks of solutions flow through the query plan operators. There is parallelism across queries, across ...

Violet
bright blue Yellow Orange Crimson
Neon purple Navy blue sky blue Green light teal turquoise
lavender blue-green brown pine green mint green pink rust
dark pink olive green Brown peach dark purple goldenrod eggshell
Maroon Relatively green Baby Diarrhea Gray turquoise
purple blue forest green periwinkle
dark blue light blue Grey Hot pink light grey
Seafoam green hunter green
green Lavender royal blue Hunter green salmon pumpkin
violet Purple yellow green Forest green orange
Pink light purple grass green cloud white ivory burnt umber
magenta army green Light blue Red Peach fuschia brick red
Periwinkle light brown pale pink
dark teal Salmon Teal

Natural Language Processing





Ron Pope
@RonPopeMusic

Following



Went and saw "The Hunger Games" earlier today. I read all the books. I think the movie could've been longer...otherwise I dug it.

11
RETWEETS

6
FAVORITES



6:23 PM - 1 Apr 12 via web · Embed this Tweet


Reply Retweet Favorite

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- Categories
 - Cameras & Photo (286,462)
 - Digital Cameras (42,714)
 - Camera & Photo Accessories (129,609)
 - Film Photography (25,982)
 - Vintage Movie & Photography (17,480)
 - Lenses & Filters (25,465)
 - More ▾
 - Consumer Electronics (116,238)
 - Gadgets (85,624)
 - Car Electronics (16,385)
 - Other (4,956)
 - Batteries & Chargers (2,909)
 - More ▾
 - Cell Phones & PDAs (76,290)
 - Cell Phones & Smartphones (64,396)
 - Cell Phone & PDA Accessories (9,639)
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93 items available
from all eBay sellers

Nikon D3000 10.2 MP Digital SLR Camera - Black (Kit w/ AF-S DX 18-55mm VR Lens) **93** items available from all sellers
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Buy new 🏆: **\$429.99** Save 22%

42 new from: \$429.00
45 used from: \$324.99
6 refurbished from: \$279.00
Next auction ends: \$299.00 | 55m

★★★★★ (211 reviews)




463 items available
from all eBay sellers

Canon EOS Rebel T3i 18.0 MP Digital SLR Camera - Black (Kit w/ EF-S 18-55mm IS II Lens) **463** items available from all sellers
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Buy new 🏆: **\$666.37** Save 26%

446 new from: \$675.00
9 used from: \$649.99
8 refurbished from: \$639.99
Next auction ends: \$670.00 | 3h 58m

★★★★★ (117 reviews)



56 items available
from all eBay sellers

Canon PowerShot Digital ELPH SD1300 IS / IXUS 105 12.1 MP Digital Camera - Silver **56** items available from all sellers
[See all listings](#)

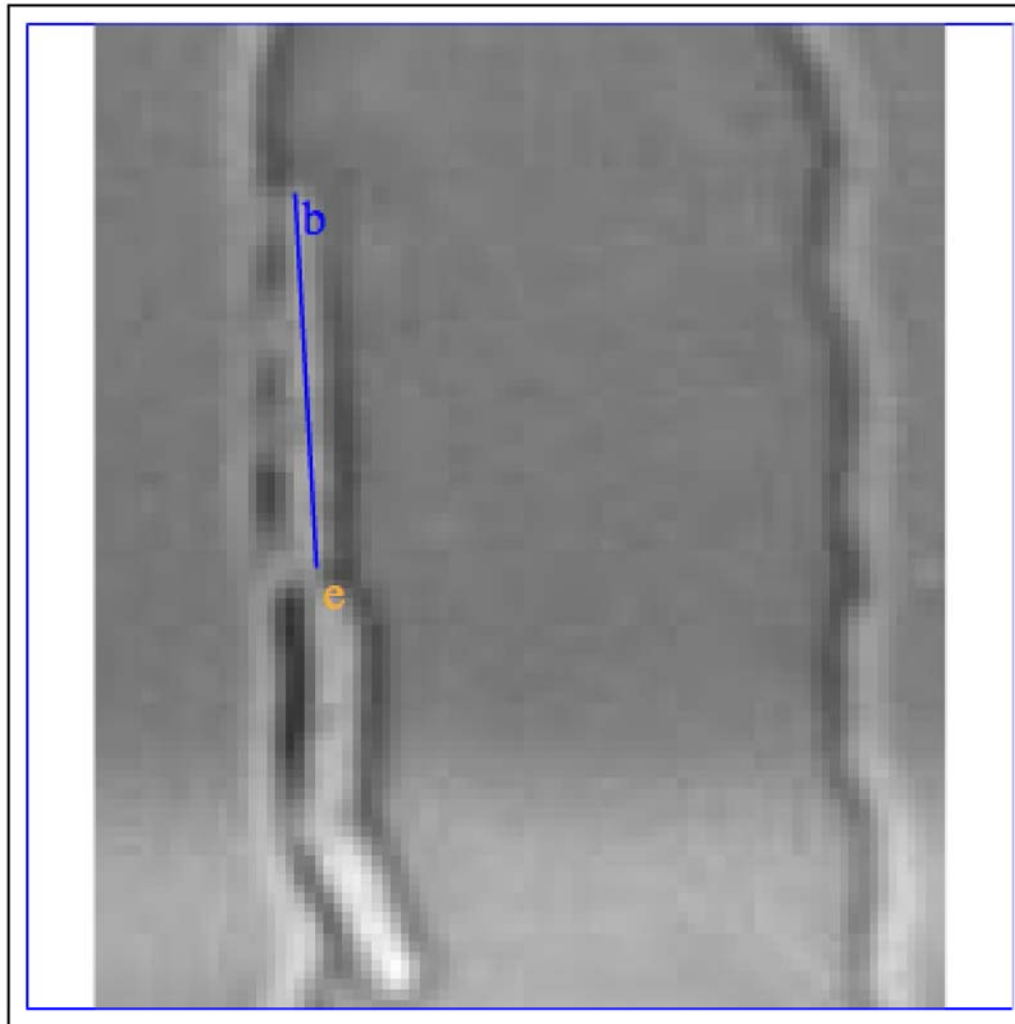
Buy new 🏆: **\$133.92** Save 33%

24 new from: \$130.00
24 used from: \$24.99
8 refurbished from: \$99.95
Next auction ends: \$59.99 | 2h 53m

★★★★★ (110 reviews)



Mark the cells in the image below



Object:

simplecell

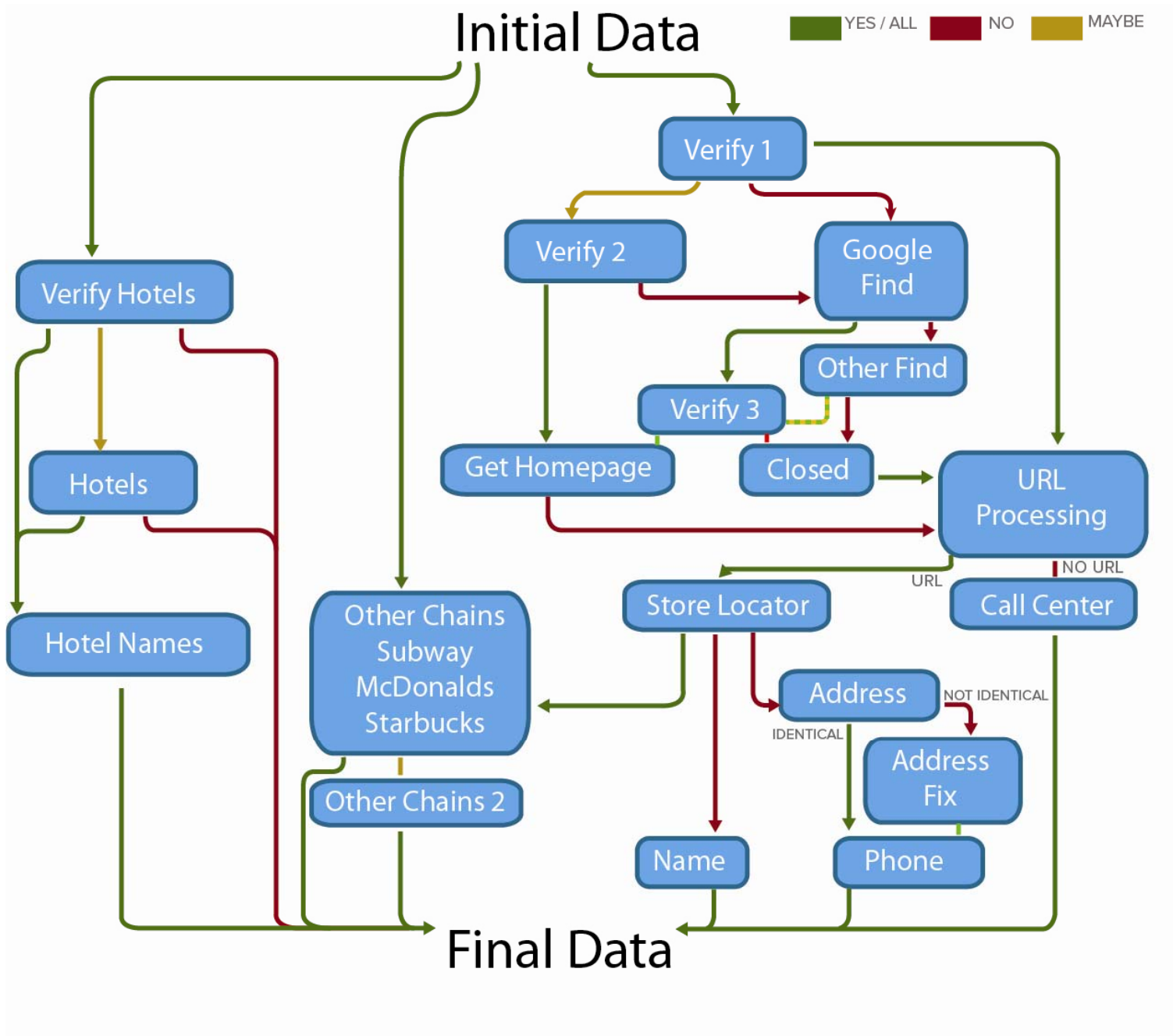
Done

Cancel

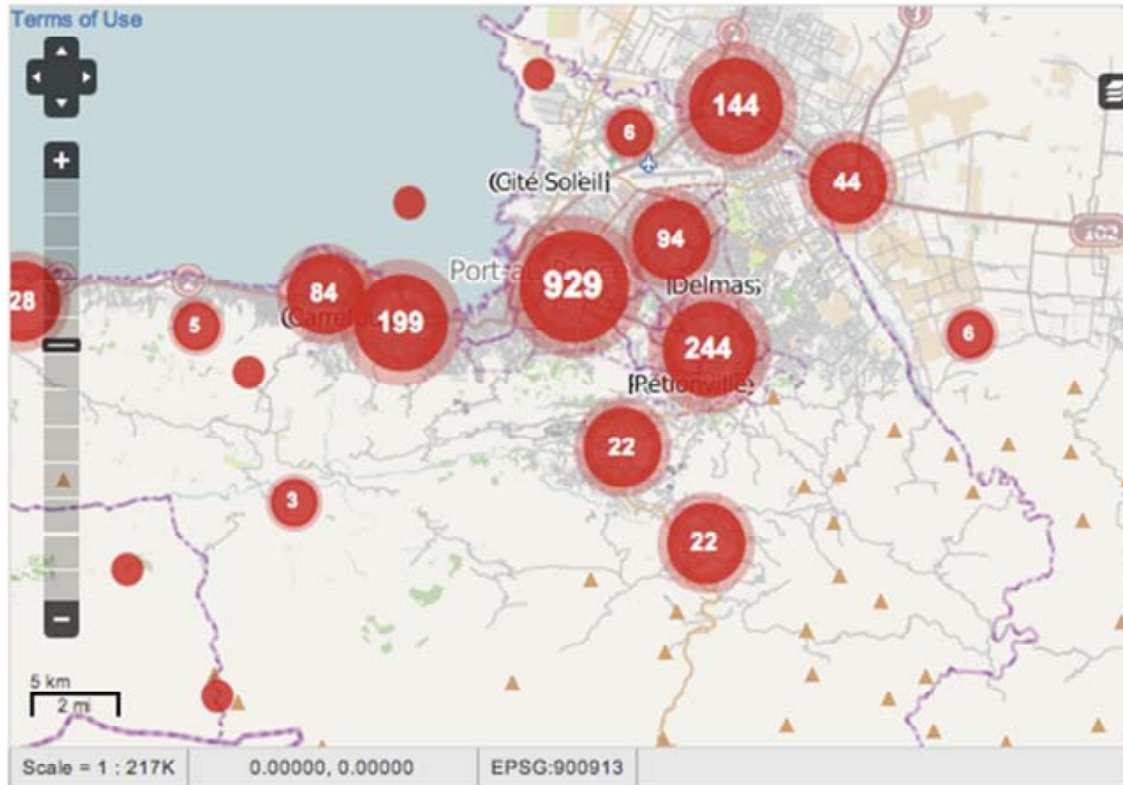
Undo

Next point:

All done







ALL CATEGORIES



1. URGENCES | EMERGENCY



2. MENACES | THREATS



3. URGENCES LOGISTIQUES | VITAL LINES



4. SECOURS | RESPONSE

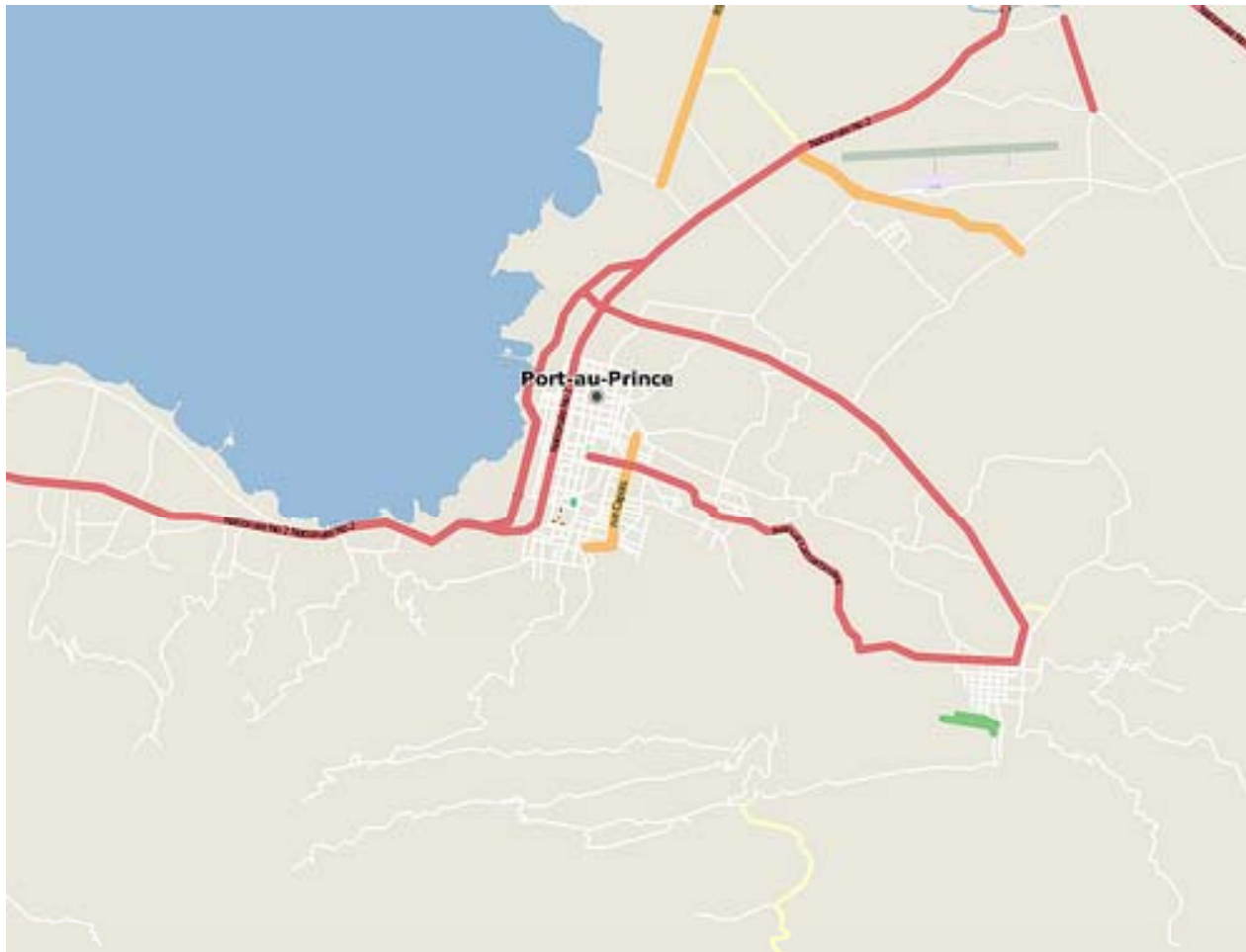


5. AUTRE | OTHER

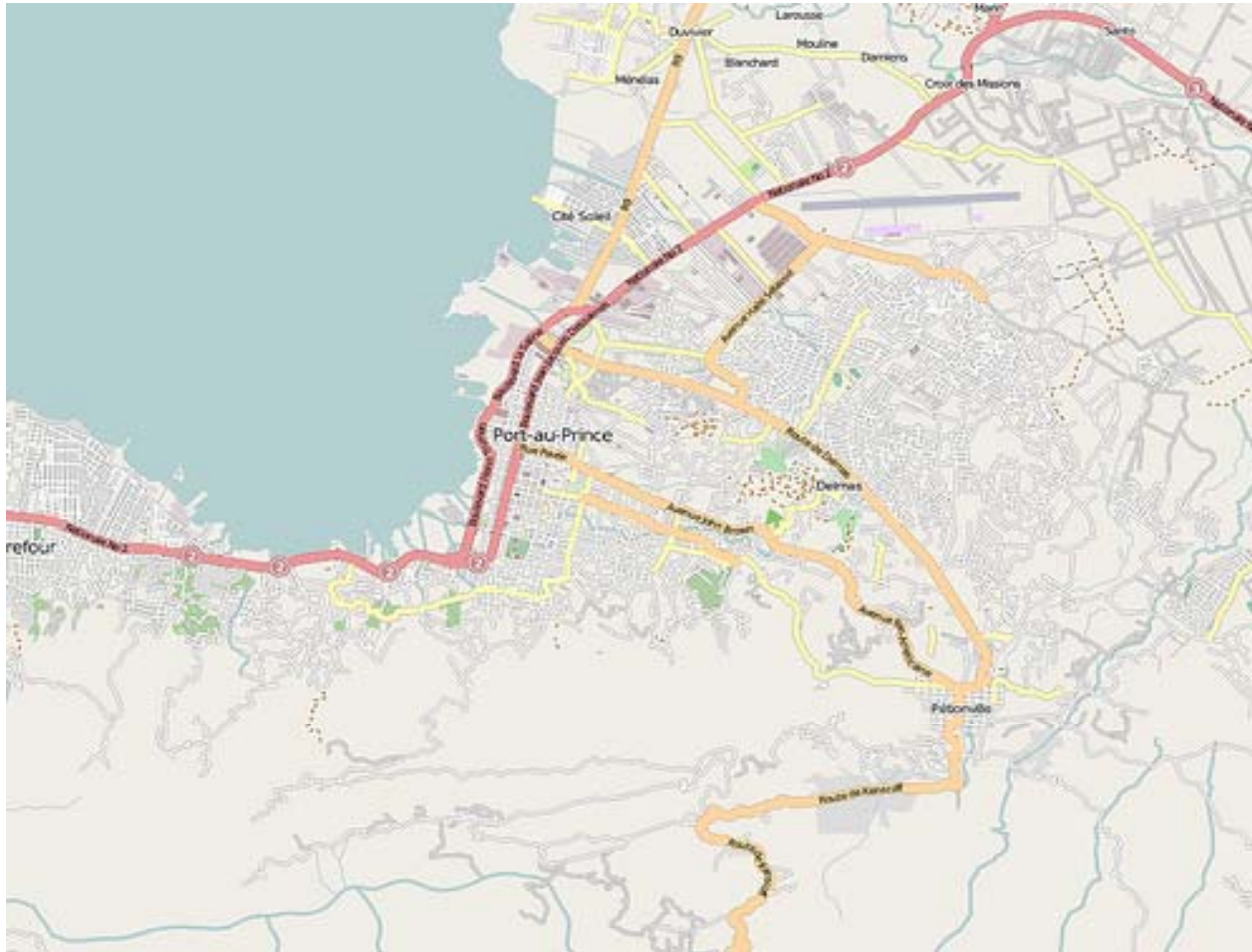


6. NOUVELLES DE PERSONNES | PERSONS NEWS

Crowdsourced mapping – Jan 12



Crowdsourced mapping – Jan 23



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December 7, 2010
LiveOps Customers Discuss their Success with Cloud Computing at

Webcast with IDC

[OVUM Report](#) [Customer Testimonials](#)



True Cloud Contact Center Adoption is Now

New Analyst Webcast with Stephen Loynd of IDC and Paul Lang, Moderated by CRM Magazine

- #### Call Center Solutions
- [Insurance Solution](#)
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Classify galaxies

Answer the question below using the buttons provided.

Is the galaxy simply smooth and rounded, with no sign of a disk?



Smooth



Features or disk



Star or artifact

HOW HEALTHY IS THIS?



Spinach Cobb Salad

0 Like

FAT

FIT



Feed



Fit or Fat



Snap



Friends



Me

Gigwalk

For Business

How it Works

Login

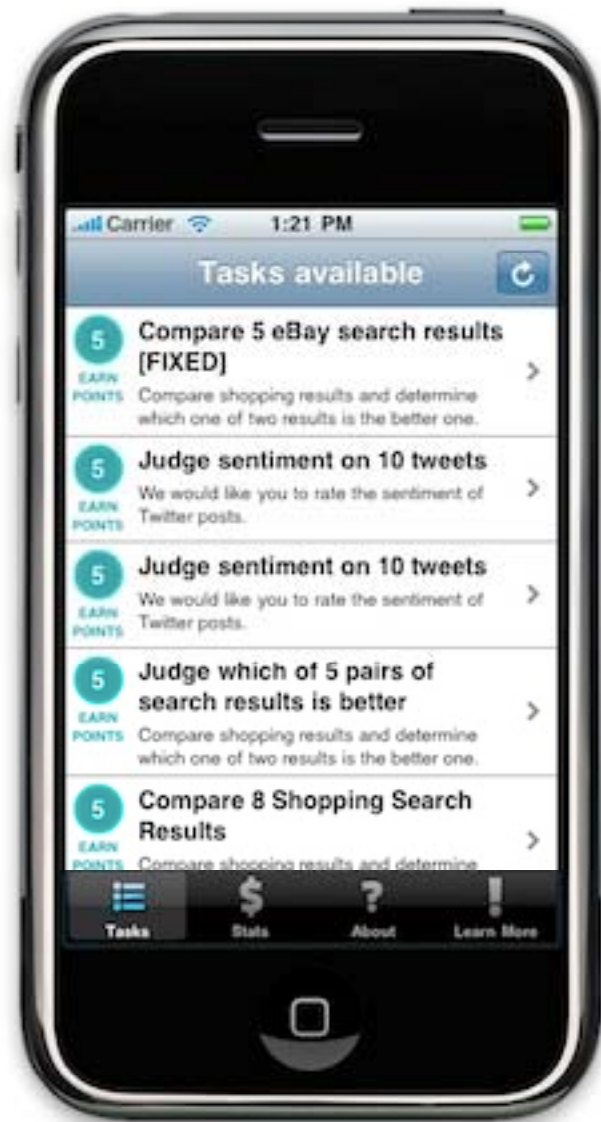
Work on the go.

Earn a second paycheck with your smartphone by doing flexible work that builds your reputation.

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12

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Home Accounts **Earn** Redeem Friends Help

Get 5 Friends to sign up
Get 10 Free Embee Points
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Peanut **Internet Explorer** Sometrics Tapjoy Supersonics SponsorPay Super Rewards

Tasks available

Points
9 available

9
Embee Points
535 available

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THIS IS A JOB ONLY FOR PEOPLE WITH ACCESS TO INTERNET EXPLORER! Also, you must be able to use

All HITs | **HITs Available To You** | HITs Assigned To You

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All HITs

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Mexican-Spanish/English Audio Transcription

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Requester: [Kartik Audhkhasi](#) **HIT Expiration Date:** May 2, 2011 (12 weeks 5 days) **Reward:** \$0.03
Time Allotted: 3 minutes **HITs Available:** 13368

Find URLs to Consumer Electronics hours of operation

[View a HIT in this group](#)

Requester: [Dolores Labs](#) **HIT Expiration Date:** Feb 9, 2011 (6 days 23 hours) **Reward:** \$0.10
Time Allotted: 60 minutes **HITs Available:** 9989

Find URLs to Gallery and Museum hours of operation

[View a HIT in this group](#)

Requester: [Dolores Labs](#) **HIT Expiration Date:** Feb 4, 2011 (2 days 12 hours) **Reward:** \$0.10
Time Allotted: 60 minutes **HITs Available:** 5761

Product Search Relevance - IT2 - CLOSED HIT

[Take Qualification test \(Why?\)](#) | [View a HIT in this group](#)

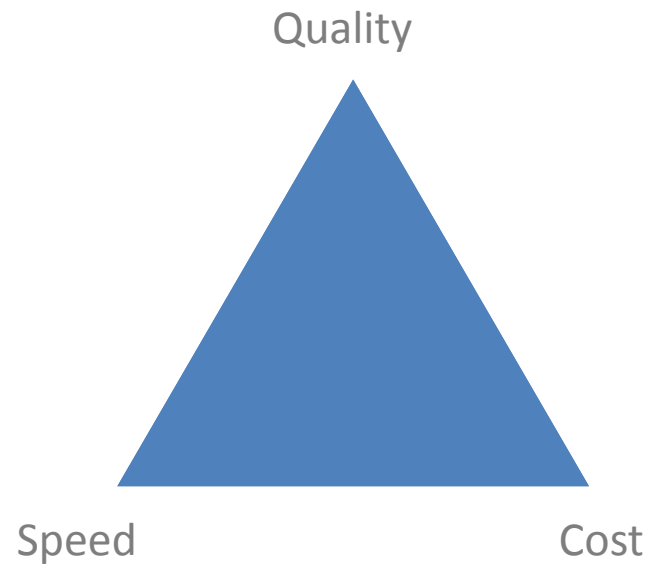
Requester: [Amazon Requester Inc.](#) **HIT Expiration Date:** Feb 6, 2011 (4 days 4 hours) **Reward:** \$0.00
Time Allotted: 10 minutes **HITs Available:** 4453

Find URLs to Grocery Store hours of operation

[View a HIT in this group](#)

Requester: [Dolores Labs](#) **HIT Expiration Date:** Feb 9, 2011 (6 days 23 hours) **Reward:** \$0.10
Time Allotted: 60 minutes **HITs Available:** 3634

Crowdsourcing: Quality – Speed – Cost



Quality: CrowdFlower Markup Language

```
<cml:checkboxes validates="required" label="Sample checkboxes:">  
  <cml:checkbox label="Checkbox 1" default="true" />  
  <cml:checkbox label="Checkbox 2" />  
  <cml:checkbox label="Checkbox 3" />  
</cml:checkboxes>
```

Sample checkboxes:

- Checkbox 1
- Checkbox 2
- Checkbox 3

- HTML-based markup
- Presentation control
- Aggregation
- Extensive validation library
 - Web pages, Regex, Numeric, Addresses, etc.

Task-specific CML

- cml:taxonomy

Automotive i	→	Cars i	→	Broken For cars that don't run anymore. Working cars belong in Running . Select this category
Baby i	→	Trucks		
Beauty		Car Parts i	→	
Books i	→			Running
Cell Phones & Service i	→			

- cml:hours

Monday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Tuesday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Wednesday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Thursday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Friday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Saturday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day
Sunday	Select one: ↓ to Select one: ↓	<input type="checkbox"/> Open all day
	Add extra time range	<input type="checkbox"/> Closed all day

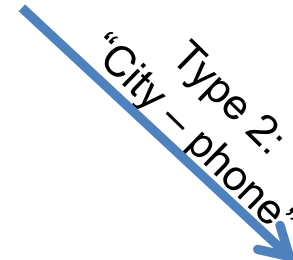
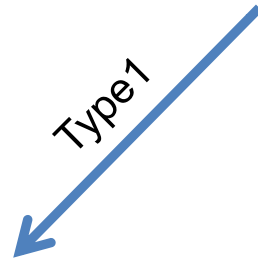
Gold standard QA

- Inject data with known correct response
- Reject workers who fall below an accuracy threshold
- + Explicit measurement of worker quality
- + Explicit quality standard
- + In-task training
- Manual process of gold creation

Programmatic Gold

Gramercy Tavern
Phone number: 212-477-777
Address: 42 E 20th St
City, State: New York, NY 10003

Answer = "Yes, this is the correct contact!"



Gramercy Tavern
Phone number: 212-477-777
Address: 42 E 20th St
City, State: New York, NY 10003

Gold Answer = "Yes, this is the correct contact!"

Gramercy Tavern
Phone number: 212-555-1234
Address: 42 E 20th St
City, State: Albany, NY 10003

Gold Answer = "No"
Auto feedback = "The city and phone number don't match"

Peer Review (a.k.a. Double Pass)

- Generate subjective content (e.g. product description)
- Review content
- Flag sources of bad content
- Bonus sources of good content

Q&A / Demo

Over 400 million judgments and counting



CrowdFlôwer

Chris Van Pelt

vanpelt@crowdfower.com

@vanpelt