

# ***The Circle Design Workbook Excerpts***

This document accompanies the following paper:

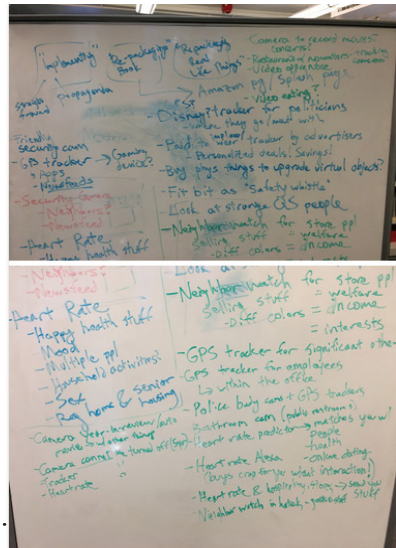
Richmond Y. Wong, Ellen Van Wyk and James Pierce. (2017). Real-Fictional Entanglements: Using Science Fiction and Design Fiction to Interrogate Sensing Technologies. In *Proceedings of the ACM Conference on Designing Interactive Systems (DIS '17)*.

<http://dx.doi.org/10.1145/3064663.3064682>

# Workbook Process on Tumblr

We organized our design workbook, including designs and reference, on tumblr.

Initial thoughts and brainstorming



Potential workbook design ideas - let's try to get as many of them sketched out in some form or another in 2 weeks (8/1)

Additional ideas (8/3)

Vital radio for decision making - a smartgun controlled by vital radio, and an "impulse shopping protector" - where your ability to do things is controlled by heartbeat, and you have to bring your heartbeat down in order to do the actions

#meta #thoughts



Jul 19, 2016

Real-world reference links



SciFi reference link

Finished designs



Preliminary sketch

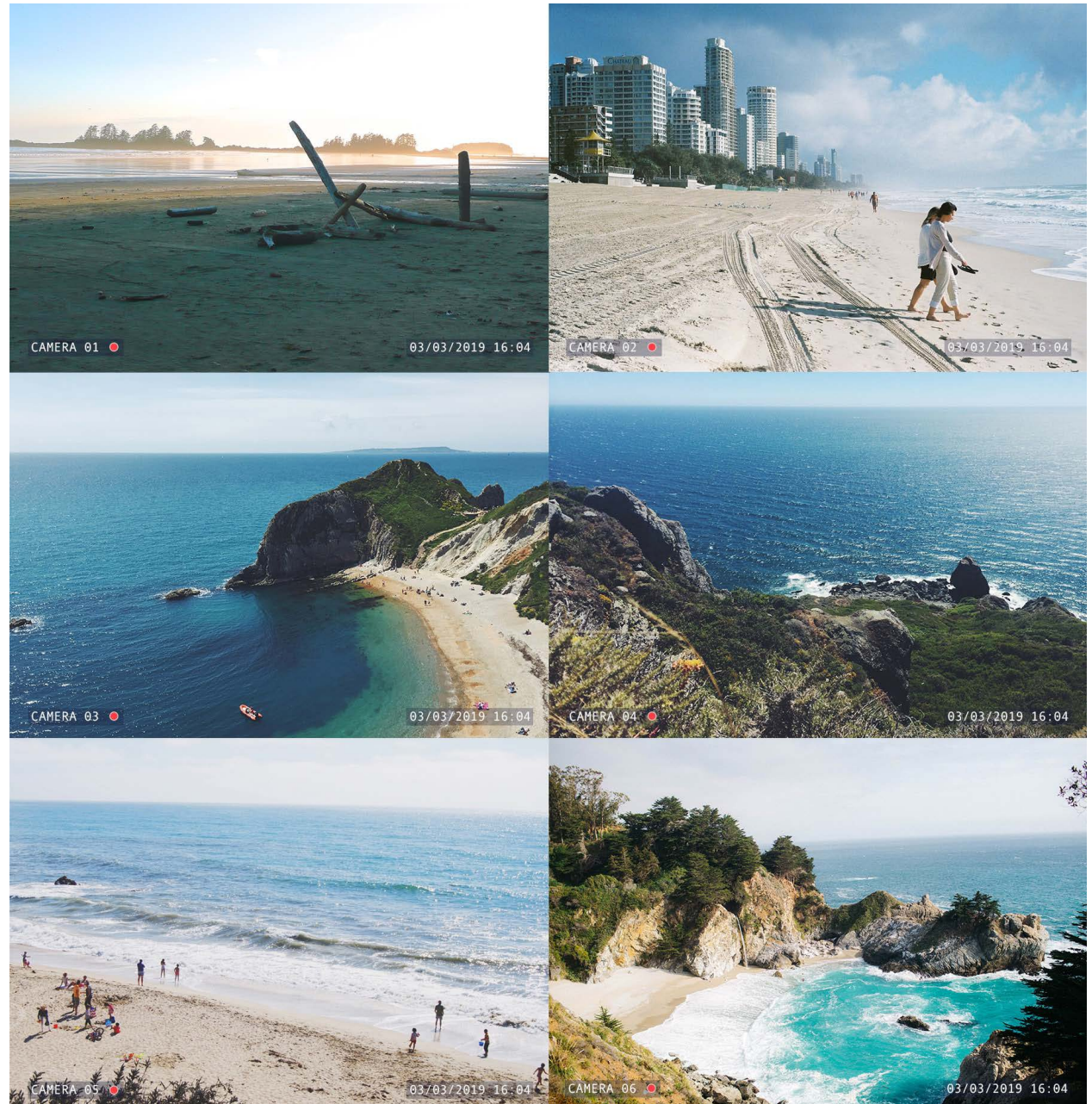


## SeeChange Beach

*“Okay, so I set up that camera this morning. I taped it to a stake, stuck that stake in the sand, in the dunes, with no permit, nothing. In fact, no one knows it’s there. So this morning I turned it on, then I drove back to the office, accessed Camera One, Stinson Beach, and I got this image. Actually, I was pretty busy this morning. I drove around and set up one at Rodeo Beach, too. And Montara. And Ocean Beach. Fort Point.”*

*With each beach Bailey mentioned, another live image appeared, each of them live, visible, with perfect clarity and brilliant color.”<sup>1</sup>*

*-Bailey, Executive at The Circle at the SeeChange launch event*



1. Excerpt from Dave Eggers' The Circle (2013)

# Child Track

"Now the exciting, and blazingly simple part," he said, smiling at Jackie with professional respect, "is that we can store all this information in the nearly microscopic chip, which is now used purely for safety reasons. But what if it provides both locational tracking and educational tracking? What if it's all in one place?"

"It's a no-brainer," Jackie said.

"Well, I hope parents will see it that way. For participating families, they'll have constant and real-time access to everything – location, scores, attendance, everything. And it won't be in some handheld device, which the kid might lose. It'll be in the cloud, and in the child him- or herself, never to be lost."<sup>1</sup>

-Francis and Jackie, employees at The Circle

The "Feed" tab presents live updates of their academic work

The "Overview" tab provides a summary of academic performance over time, to be used by administrators

Amber Matsuda  
Soccer practice - Cambridge HS

**Feed** Overview

**Math - Problem Solving**  
40 minutes ago

PROBLEM:  
 $\int \cos^2(x) \sin(x) dx.$

ANSWER:  
 $= -\frac{1}{3} \cos^3(x).$

**Literature - Reading**  
Yesterday at 1:34 pm

"Saturday morning was come, and all the summer world was bright and fresh, and brimming with life. There was a song in every heart; and if the heart was young the music issued at the lips. There was cheer in every face and a spring in..." [read more](#)

Tom Sawyer by Mark Twain

**Biology - Writing**  
Yesterday at 1:04 pm

"Weakly electric fish such as the *Eigenmannia sp.* continuously emit and analyze an electrical field with a cyclically varying amplitude. When the environment alters qualities of the efferent field, such as amplitude or waveform..." [read more](#)

Lab Report 7 - Electric Jamming Response

Amber Matsuda  
Soccer practice - Cambridge HS

**Feed** Overview

**Math**

On average, Amber scores **76%** points, while her peers score **72%**

She solves them **0.2** times more quickly

Amber's percentiles by type

Calculus 82nd Trigonometry 60th Geometry 90th

**Reading**

Amber has read **3.2** fewer books than her average peer

Amber scores on average **82%** while her peers score **85%**

1. Excerpt from Dave Eggers' The Circle (2013)

# Vital Radio: Elderly Care

Victor held sleek black box, about the size of a small DVD player. He turned to the audience and smiled.

“My grandmother’s eighty-seven. A year ago she fell and broke her hip, and since then I’ve been concerned about her. Last weekend, while she was napping-“

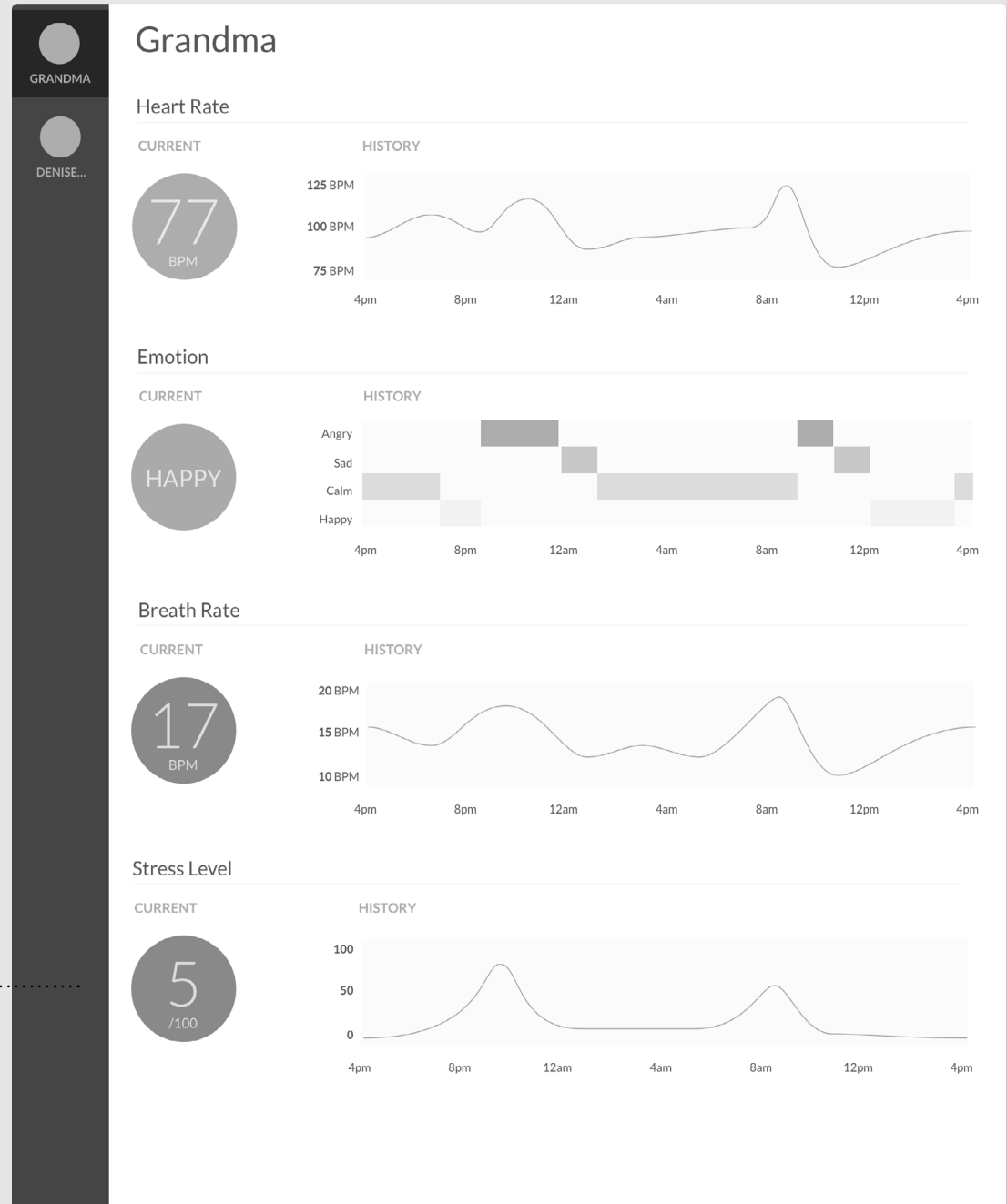
A wave of laughter rippled through the audience.

“Forgive me! Forgive me!” he said, “I had no choice. She wouldn’t have let me do it otherwise. So I snuck in, and I installed Vital-Radio in her bedroom and the living room. It can see through walls up to twenty five feet, so with just two of these boxes I can cover her whole house. She won’t notice it – it looks just like another electronic gadget hooked up to her television.”

“And of course,” Victor continued “all that data is stored in the cloud, and in your tablet, anywhere you want it. It’s always accessible, and is constantly updated. So if you fall, hit your head, you’re in the ambulance, the EMTs can access everything about your vitals history in seconds. And it’s not just healthcare. Imagine your home adapting music and lighting based on your vital signs and your mood. Or getting customized assistance based on your stress level at a Vital-Radio kiosk in an unfamiliar airport. Imagine the possibilities!”<sup>1</sup>

-Victor, executive at The Circle

The data present a narrative of grandma’s day



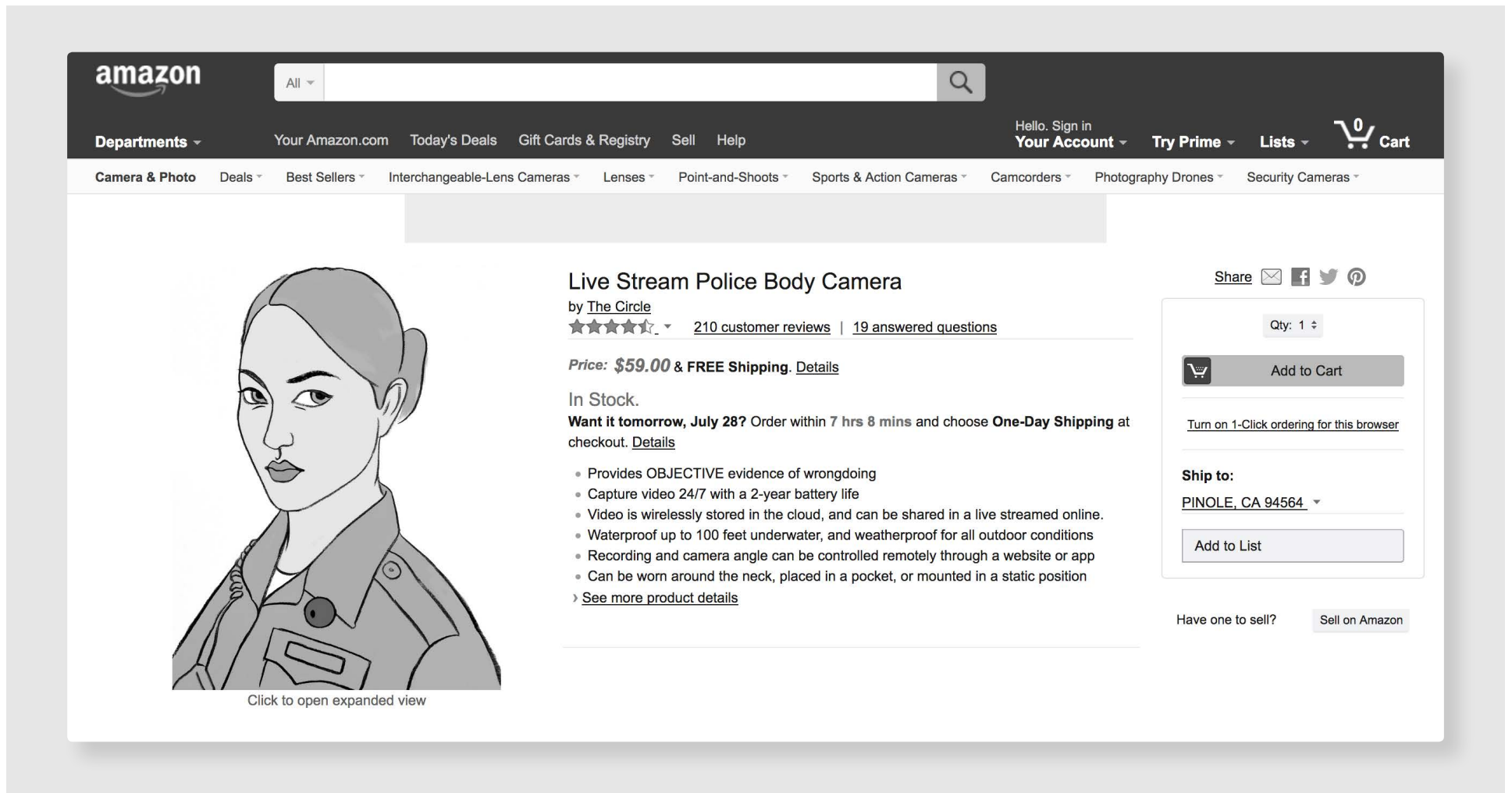
1. a short piece of fan-fiction written by the authors in the style of Eggers’ The Circle



# Wireframe Amazon Product Page 1/3

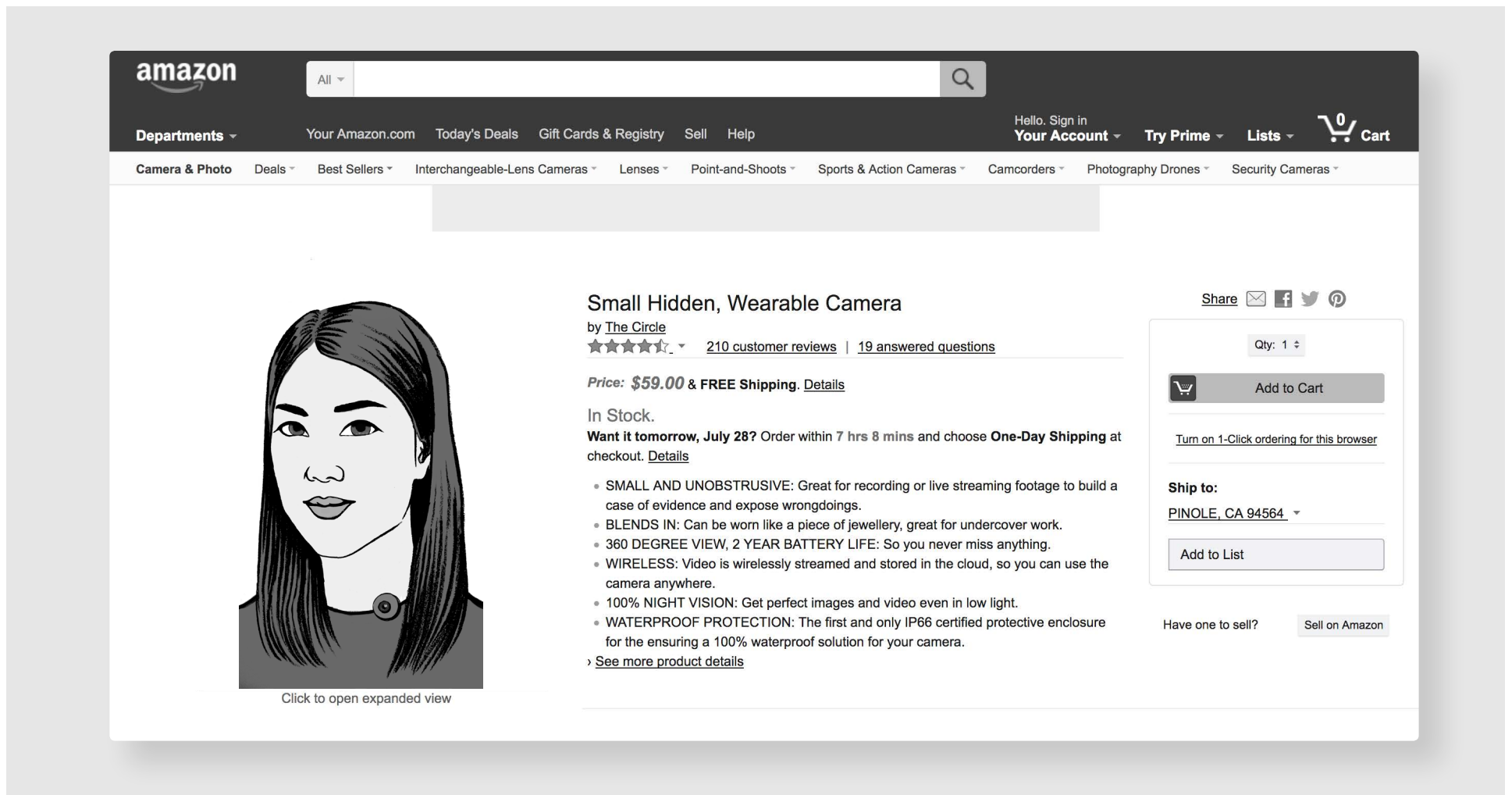
The SeeChange Amazon pages show the same SeeChange camera being sold as three different products to different audiences.

In this page, SeeChange is positioned as a police body camera.



# Wireframe Amazon Product Page 2/3

SeeChange framed as a small, hidden, wearable camera for activists groups like PETA.



# Wireframe Amazon Product

## Page 3/3

SeeChange marketed "For Independence, Freedom, and Survival," to be used by people suspicious of the government and may want to monitor government

The wireframe shows an Amazon product page for a 'Hideable Camera'. The top navigation bar includes the Amazon logo, a search bar, and links for 'Departments', 'Your Amazon.com', 'Today's Deals', 'Gift Cards & Registry', 'Sell', and 'Help'. On the right, there are links for 'Hello. Sign in Your Account', 'Try Prime', 'Lists', and a shopping cart icon with '0' items. Below the navigation bar, a breadcrumb trail reads: 'Camera & Photo > Deals > Best Sellers > Interchangeable-Lens Cameras > Lenses > Point-and-Shoots > Sports & Action Cameras > Camcorders > Photography Drones > Security Cameras >'. The main content area features a large image of a hand holding a small, round camera on a thin stem. Below the image is a link: 'Click to open expanded view'. To the right of the image is the product title 'Hideable Camera - For Independence, Freedom, and Survival' by 'The Circle'. Below the title is a star rating of 4.5 stars, '210 customer reviews', and '19 answered questions'. The price is listed as '\$59.00 & FREE Shipping' with a 'Details' link. The status is 'In Stock' with a note: 'Want it tomorrow, July 28? Order within 7 hrs 8 mins and choose One-Day Shipping at checkout.' followed by a 'Details' link. A list of features is provided: 'SMALL AND UNOBTRUSIVE: Great for recording or live streaming footage to keep an eye on the government and to protect your private property.', 'EASY TO HIDE: The people you watch will not be aware that you can see and hear them.', '360 DEGREE VIEW, 2 YEAR BATTERY LIFE: So you never miss anything.', 'WIRELESS: Video is wirelessly streamed and stored in the cloud, so you can use the camera anywhere.', '100% NIGHT VISION: Get perfect images and video even in low light.', and 'WATERPROOF PROTECTION: The first and only IP66 certified protective enclosure for the ensuring a 100% waterproof solution for your camera.' A link 'See more product details' is at the bottom. On the right side of the product area, there are social sharing icons (Share, Email, Facebook, Twitter, Pinterest), a quantity selector set to '1', an 'Add to Cart' button, a link 'Turn on 1-Click ordering for this browser', a shipping location dropdown set to 'PINOLE, CA 94564', an 'Add to List' button, and a 'Sell on Amazon' button.

amazon

All

Departments

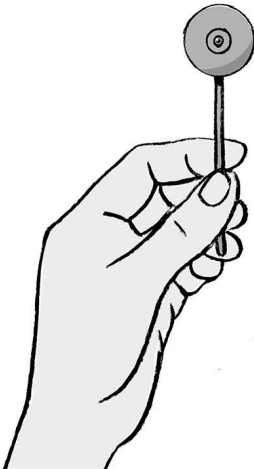
Your Amazon.com Today's Deals Gift Cards & Registry Sell Help

Hello. Sign in  
Your Account

Try Prime Lists

0 Cart

Camera & Photo Deals Best Sellers Interchangeable-Lens Cameras Lenses Point-and-Shoots Sports & Action Cameras Camcorders Photography Drones Security Cameras



Click to open expanded view

### Hideable Camera - For Independence, Freedom, and Survival

by [The Circle](#)

★★★★☆ 210 customer reviews | 19 answered questions

**Price: \$59.00 & FREE Shipping.** [Details](#)

**In Stock.**  
**Want it tomorrow, July 28?** Order within 7 hrs 8 mins and choose **One-Day Shipping** at checkout. [Details](#)

- **SMALL AND UNOBTRUSIVE:** Great for recording or live streaming footage to keep an eye on the government and to protect your private property.
- **EASY TO HIDE:** The people you watch will not be aware that you can see and hear them.
- **360 DEGREE VIEW, 2 YEAR BATTERY LIFE:** So you never miss anything.
- **WIRELESS:** Video is wirelessly streamed and stored in the cloud, so you can use the camera anywhere.
- **100% NIGHT VISION:** Get perfect images and video even in low light.
- **WATERPROOF PROTECTION:** The first and only IP66 certified protective enclosure for the ensuring a 100% waterproof solution for your camera.

[See more product details](#)

Share

Qty: 1

Add to Cart

[Turn on 1-Click ordering for this browser](#)

**Ship to:**  
[PINOLE, CA 94564](#)

Add to List

Have one to sell? [Sell on Amazon](#)



# NeighborWatch Pro

*“Seems like this solves one of the problems of SeeChange,” Stenton said, “which is that even when there are cameras everywhere, not everyone can watch everything. If a crime is committed at three a.m., who’s watching camera 982, right?”*

*“Right,” Gareth said. “See, this way the cameras are just part of it. The color-tagging tells you who’s anomalous, so you only have to pay attention to*

*that particular anomaly. Of course, the catch is whether or not this violates any privacy laws.”*

*“Well, I don’t think that’s a problem,” Stenton said. “You have a right to know who lives on your street. What’s the difference between this and simply introducing yourself to everyone on the street? This is a more advanced and thorough version of ‘good fences make good neighbors.’ I would imagine this*

*would eliminate pretty much all crime committed by strangers to any given community.”<sup>1</sup>*

*-Stenton, Executive at The Circle and Gareth, developer of NeighborWatch*

NeighborWatch Pro Home About Contact More ▾

## NeighborWatch Pro

The best in neighborhood security.  
Automatically identify threats to your community.

[Learn more](#)

Our homeowners' association bought the system after a series of break-ins - our association fees only went up \$20 per month, and the breaking and entering has stopped. It's well worth it! - Mary P.

[View details >>](#)

NeighborWatch Pro works! Since we installed it in our gated community, those hoodie wearing thug teenagers have stopped roaming around our neighborhood! - Chris G.

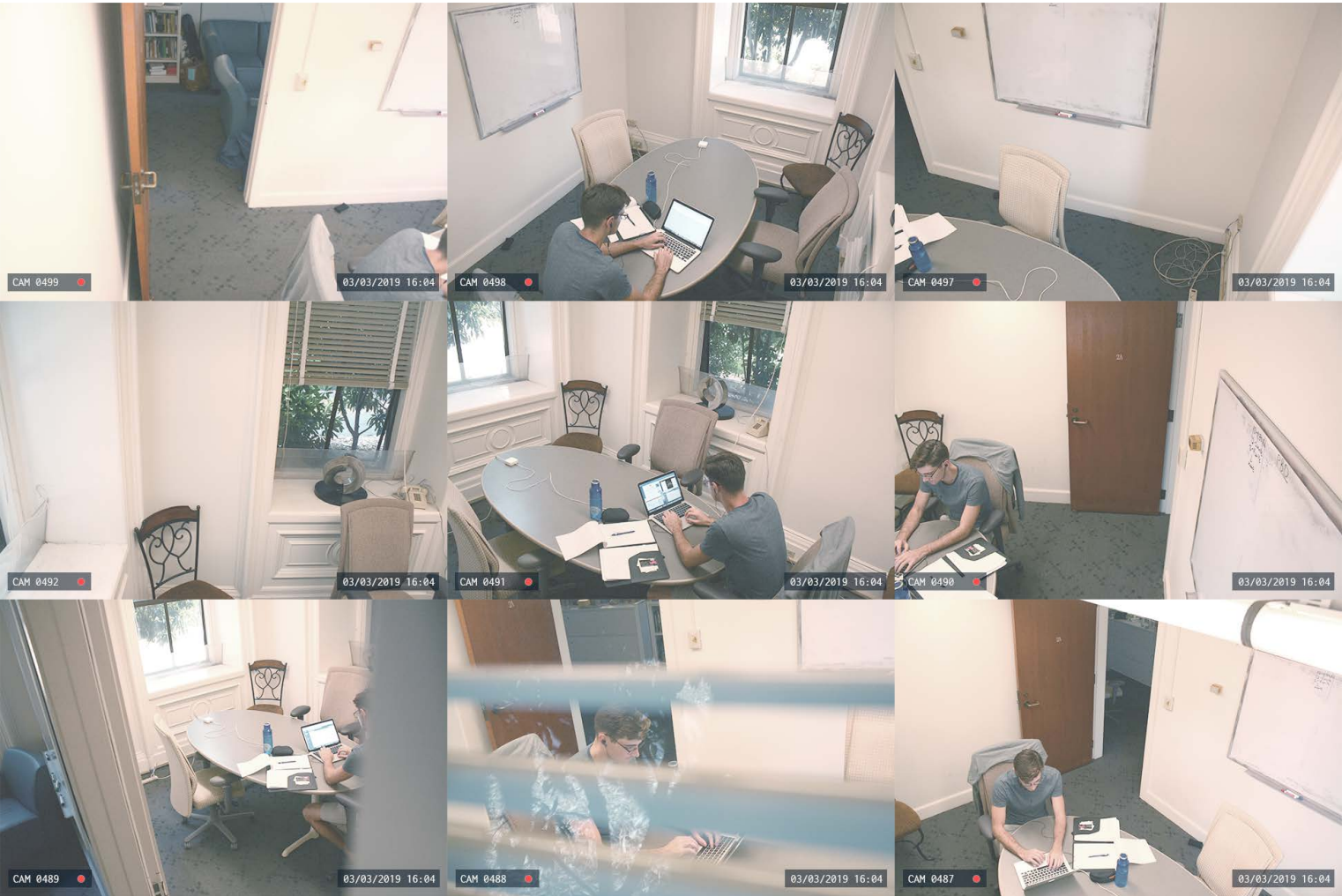
[Learn More >>](#)

It's a much fairer and unbiased way to police our neighborhood because it uses data and algorithms to identify people who are strangers to the neighborhood. - William N.

[Watch videos >>](#)

1. Excerpt from Dave Eggers' The Circle (2013)

# SeeChange Angles



# Airport Security

Airport Security depicts an imagined use of NeighborWatch and SeeChange, where an airport surveillance system automatically assigns threat statuses to people by color-coding them.





# License Plate Tracker

The License Plate Tracker puts SeeChange in the hands of the police or government intelligence agencies.


START TIME  
10/14/2019 11:40

END TIME  
10/14/2019 11:51


PLATE NUMBER  
GSF 006


SEARCH

10/14/2019 11:48  
Ustick + N Cole



CAM 045





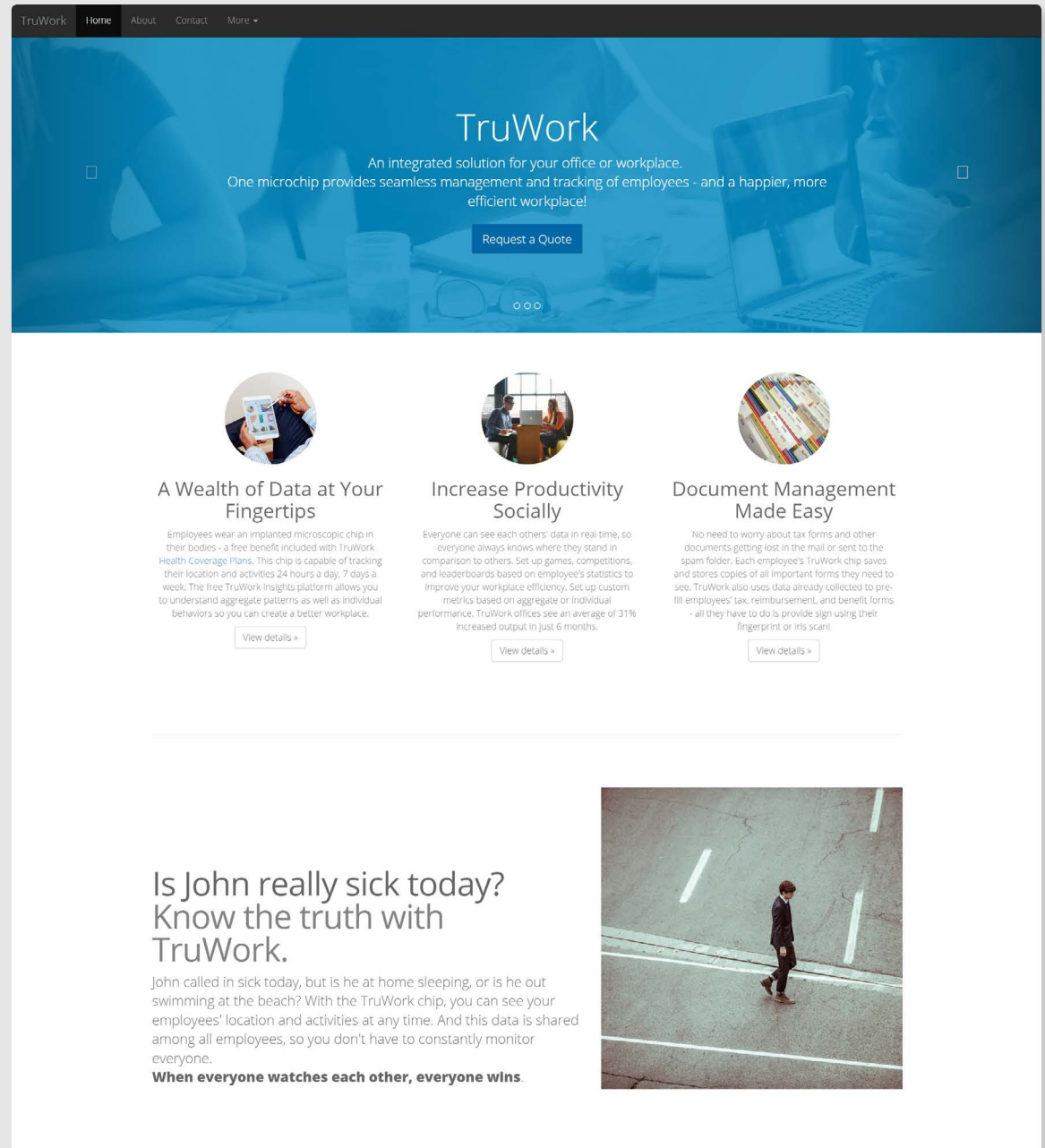
Amber Matsuda  
Clearance: 3

LOG OUT



# TruWork

TruWork re-imagines ChildTrack as an implantable tracking device that employers use to keep track of their employees' whereabouts and work activities.



The image shows a website landing page for TruWork. At the top, there is a navigation bar with links for Home, About, Contact, and More. The main header features a blue-tinted background image of people working at a desk with a laptop. The text reads: "TruWork. An integrated solution for your office or workplace. One microchip provides seamless management and tracking of employees - and a happier, more efficient workplace!" Below this is a "Request a Quote" button. The middle section contains three columns, each with a circular icon and a heading: "A Wealth of Data at Your Fingertips", "Increase Productivity Socially", and "Document Management Made Easy". Each column has a short paragraph of text and a "View details" button. The bottom section has a large heading: "Is John really sick today? Know the truth with TruWork." followed by a paragraph and a "When everyone watches each other, everyone wins" slogan. To the right of this text is a photograph of a person walking on a street.


TruWork


Home About Contact More


TruWork

An integrated solution for your office or workplace.  
One microchip provides seamless management and tracking of employees - and a happier, more efficient workplace!

Request a Quote

  
**A Wealth of Data at Your Fingertips**  
Employees wear an implanted microscopic chip in their bodies - a free benefit included with TruWork Health Coverage Plans. This chip is capable of tracking their location and activities 24 hours a day, 7 days a week. The free TruWork Insights platform allows you to understand aggregate patterns as well as individual behaviors so you can create a better workplace.  
[View details »](#)


  
**Increase Productivity Socially**  
Everyone can see each others' data in real time, so everyone always knows where they stand in comparison to others. Set up games, competitions, and leaderboards based on employee's statistics to improve your workplace efficiency. Set up custom metrics based on aggregate or individual performance. TruWork offices see an average of 31% increased output in just 6 months.  
[View details »](#)

  
**Document Management Made Easy**  
No need to worry about tax forms and other documents getting lost in the mail or sent to the spam folder. Each employee's TruWork chip saves and stores copies of all important forms they need to see. TruWork also uses data already collected to pre-fill employees' tax, reimbursement, and benefit forms - all they have to do is provide sign using their fingerprint or iris scan.  
[View details »](#)

**Is John really sick today?  
Know the truth with  
TruWork.**

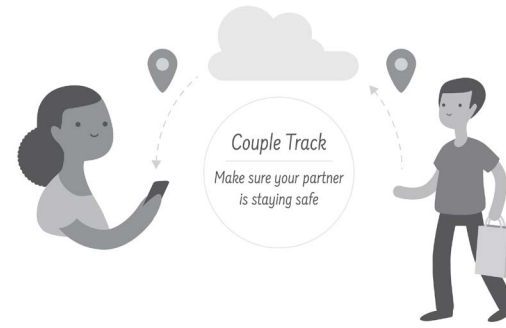
John called in sick today, but is he at home sleeping, or is he out swimming at the beach? With the TruWork chip, you can see your employees' location and activities at any time. And this data is shared among all employees, so you don't have to constantly monitor everyone.

**When everyone watches each other, everyone wins.**

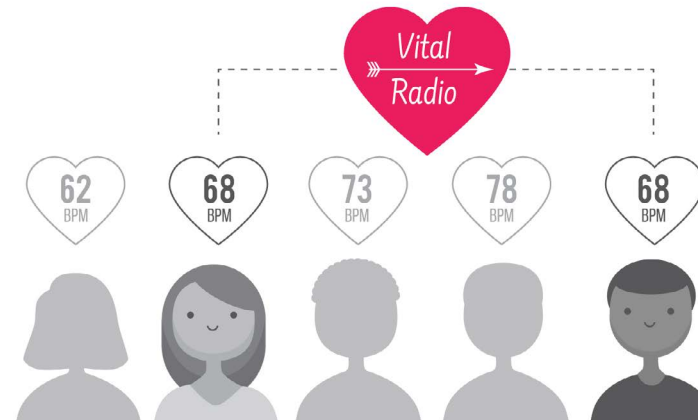


# Product Diagrams

These diagrams borrow from startup companies visual language, which often includes a series of cartoons that provide a simple explanation of the product, in order to make the concepts in the designs more accessible to people familiar with that visual language.



CoupleTrack is an idea based on ChildTrack, which allows a couple to use implanted chips so they always know where the other one is and what they are doing.



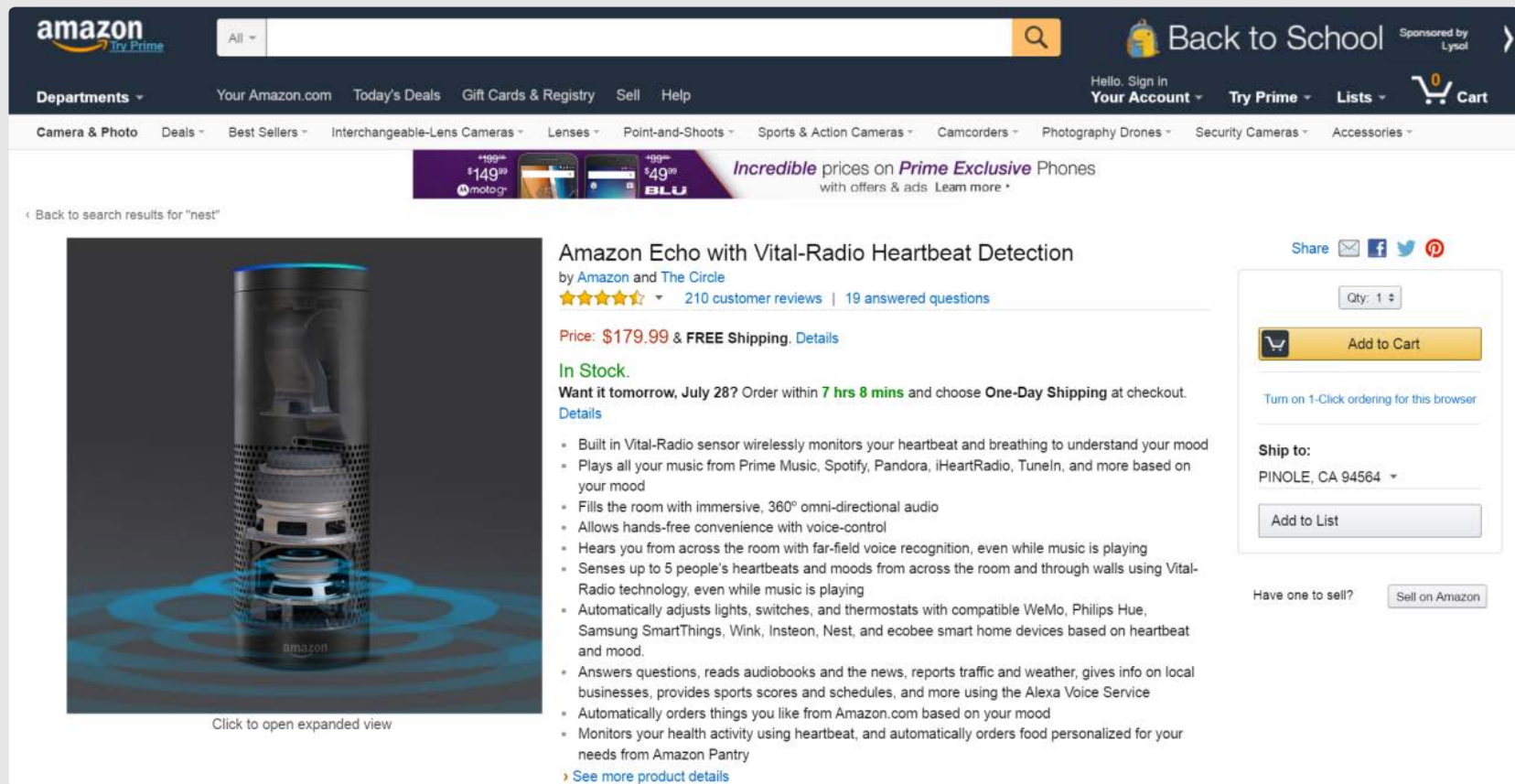
Vital Radio Match extends Vital Radio to be used as an online dating service by matching people's "compatible" heartrates.

ChildTrack for Advertisers allows advertisers to leverage a child's location data to target them with advertisements for locations nearby, or for things that children with a similar profile like.



# Amazon Echo Vital Radio

Amazon Echo with Vital-Radio combines the real AmazonEcho – a hands-free speaker, smarthome controller, and virtual assistant – with Vital Radio, presented as a product for sale by Amazon. It uses a person's heartbeat patterns to adjust a home's lighting and temperature settings, choose what music to play, and automatically order items from Amazon.com that it thinks will suit the user.



The screenshot shows the Amazon product page for the Amazon Echo with Vital-Radio Heartbeat Detection. The page features a dark navigation bar at the top with the Amazon logo, a search bar, and a "Back to School" banner. Below the navigation bar, there are departmental links and a promotional banner for "Incredible prices on Prime Exclusive Phones". The main product image shows the Amazon Echo with Vital-Radio, a cylindrical smart speaker with a glowing blue top ring. The product title is "Amazon Echo with Vital-Radio Heartbeat Detection" by Amazon and The Circle, with a 4.5-star rating and 210 customer reviews. The price is listed as \$179.99 with free shipping. The product is in stock, and there is a countdown timer for a special price. The product description lists various features, including heartbeat monitoring, music playback, voice control, and smart home integration. On the right side of the page, there are social sharing options, a quantity selector, an "Add to Cart" button, and a "Ship to:" dropdown menu.

amazon  
All

Back to School Sponsored by Lysol

Departments Your Amazon.com Today's Deals Gift Cards & Registry Sell Help

Camera & Photo Deals Best Sellers Interchangeable-Lens Cameras Lenses Point-and-Shoots Sports & Action Cameras Camcorders Photography Drones Security Cameras Accessories

Back to search results for "nest"

Amazon Echo with Vital-Radio Heartbeat Detection  
by Amazon and The Circle  
★★★★☆ 210 customer reviews | 19 answered questions

Price: \$179.99 & FREE Shipping. Details

In Stock.

Want it tomorrow, July 28? Order within 7 hrs 8 mins and choose One-Day Shipping at checkout. Details

- Built in Vital-Radio sensor wirelessly monitors your heartbeat and breathing to understand your mood
- Plays all your music from Prime Music, Spotify, Pandora, iHeartRadio, TuneIn, and more based on your mood
- Fills the room with immersive, 360° omni-directional audio
- Allows hands-free convenience with voice-control
- Hears you from across the room with far-field voice recognition, even while music is playing
- Senses up to 5 people's heartbeats and moods from across the room and through walls using Vital-Radio technology, even while music is playing
- Automatically adjusts lights, switches, and thermostats with compatible WeMo, Philips Hue, Samsung SmartThings, Wink, Insteon, Nest, and ecobee smart home devices based on heartbeat and mood.
- Answers questions, reads audiobooks and the news, reports traffic and weather, gives info on local businesses, provides sports scores and schedules, and more using the Alexa Voice Service
- Automatically orders things you like from Amazon.com based on your mood
- Monitors your health activity using heartbeat, and automatically orders food personalized for your needs from Amazon Pantry

Click to open expanded view

Share

Qty: 1

Add to Cart

Turn on 1-Click ordering for this browser

Ship to:  
PINOLE, CA 94564

Add to List

Have one to sell? Sell on Amazon