



# California Olive Oil Council



Fraud Prevention Proposal



# Logo History

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## Word List

Trustworthy

Honest

Standards

Extra Virgin

Grading

Cooperation

Benevolent

Easy to Use

Beneficial

Food

Nutrition

Health

Advocacy

Lobbying

Connections

# Proposals

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## 1 RFID Chip and App

Program an app that will be fraud resistant with the following features included:

- a. Producers Information
- b. Harvest Date and Certification Date
- c. Redesigned Seal with RFID chip
- d. Scan an Olive Oil Seal

The app will have the following optional features:

- a** Producer to Table that tracks olive oil from the producer to the store.
- b** Recipes that contain olive oil.
- c** Various levels of advertising for fund raising.

## 2 Hologram Seal

## 3 Producer's Name on Seal

# Related Logos

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# Problem Statement

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One of the major problems facing olive oil producers and certifying agencies such as the COOC is counterfeit merchandise. Many people want to sell fake “Extra Virgin Olive Oil” and cash in on the big rewards. As the COOC grows larger and gains influence, some manufacturers may try to counterfeit the seal.

The current seal is just a sticker with the date on it or not as in the dated seal or generic seal. This is very easy to counterfeit and moreover there is no specific manufacturer on the seal so anyone can take a genuine seal off one bottle and put it on theirs. When the COOC seal grows in popularity and acceptance there may be a black market for stolen or otherwise improper seals.



If a customer uses an app to identify the sticker by producer/grower and compare it to the bottle being sold, fraud can be significantly reduced and the consumer can be more assured that they are buying genuine olive oil as opposed to being victimized by fraudulent olive oil. This is very important to our food supply security.

The current website lists all approved manufacturers of olive oil but how many consumers go to the store then check the website to see if a particular manufacturer is really using the seal properly or improperly?

The COOC has the opportunity to establish trust in its label and confidence that it is the real deal as opposed to a fraud. This can be accomplished at low cost as described in the next section.

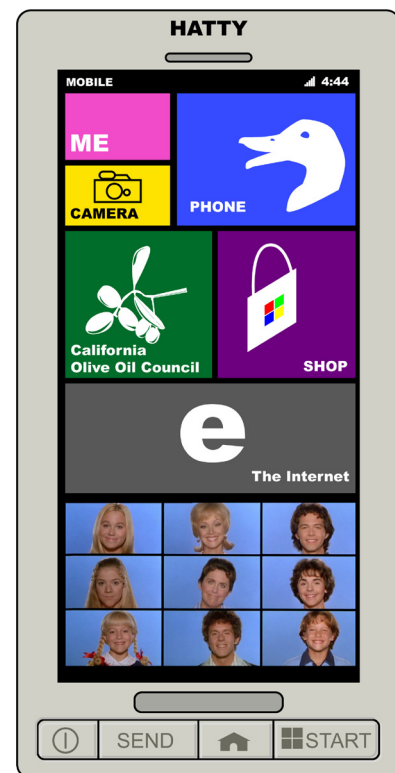


# Solutions



## RFID Tag and App

Embedding an RFID tag into the sticker is a way to turn many consumers and store owners into fraud fighters. Using the latest technology I can allow the user to verify the integrity of the COOC Seal.



# RFID Tag and App



## Splash Screen

The splash screen shows our new logo and loading for at least 2 seconds. (can be adjusted)



## Home Screen

The main menu shows what can be done with the app and a photo of olives.



## Scan Screen

When one clicks on scan a bottle they are brought to this page that invites them to scan our seal on a bottle with an RFID capable phone.



## Scan Screen

After scanning, the user is brought to a screen where they are given more info about the olive oil and a chance to report seal fraud.



BACK

FRAUD REPORTING

COOC

Welcome to Fraud Reporting

Thank you for taking the time to report possible California Olive Oil Seal fraud. To protect yourself first make sure that the bottle does not match the information below.

Producer	Mishima Corporation
Harvest Date	8-2015
Best By	8-2017
Origin of Olives	Mishima, Japan
Seal Granted	2015
Rating	Extra Virgin Certified
Website	mishima-olive.co.jp/english

If you are certain that the bottle is a different maker or is using a counterfeit label or logo, press the next button otherwise press cancel to be brought back to the main menu.

NEXT

CANCEL

# Fraud Screen

Clicking on Report Fraud brings the user to this screen so they are sure that they want to report the fraud and make certain that the information is accurate.

BACK

FRAUD REPORTING

COOC

STEP 1: Take a photo of suspect bottle.



# Fraud Screen


The user is prompted to take a photo of the suspected bottle.

BACK

FRAUD REPORTING

COOC

STEP 1: Confirm Photo



CONFIRM

RE TAKE

# Fraud Screen

The user is asked to confirm the quality and accuracy of the photo.

BACK

FRAUD REPORTING

COOC

STEP 2: Enter Information

Store Name

Store Address

Store Address 2

City

State

Zip Code

Olive Oil Name

Other Information

NEXT

# Fraud Screen

User then enters information about the store and the olive oil.

# RFID Tag and App

BACK

FRAUD REPORTING

COOC

STEP 2: Confirm Information & Finish

Store Name	Pauli Olive Shop
Store Address	555 Main St
Store Address 2	
City	Newark
State	NJ
Zip Code	
Olive Oil Name	Fugazi Olive Oil
Other Information	Has wrong sticker on it.

Sticker belongs to:

Producer	Mishima Corporation
Harvest Date	8-2015
Best By	8-2017
Origin of Olives	Mishima, Japan
Seal Granted	2015
Rating	Extra Virgin Certified
Website	mishima-olive.co.jp/english

FINISH

## Fraud Screen

User then confirms the information one more time.


BACK

FRAUD REPORTING

COOC

Thank you.

Thank you for reporting this possible case of fraud. The California Olive Oil Council will investigate this and contact the appropriate authorities to alert them to any fraud or illegal activities posted. The California Olive Oil Council works with law enforcement and stores to help maintain trust in our logo and we rely on people like you to help us keep things honest. For your effort you receive a gold olive star! Congratulations.



FINISH

## Fraud Screen

We thank them and let them know that there will be an investigation. User then clicks back to the main menu.

## Recipes (optional)

BACK

Recipe Finder

COOC

APPETIZER

BREAKFAST

MAIN DISH

MEATS

GRILL/BBQ

PASTA

DESSERT

SLOW COOK

SEARCH

## Recipe Screen


When the user clicks on the recipe icon there is a list of the kinds of foods to cook.


BACK

Recipe Finder


COOC

MAIN COURSES






48 Hour Pork  
Delicious slow cook pork with vegetables and olive oil secret.



Katsu Don Olive Edition  
Savory breaded pork with egg and olive oil.



Filet Mignon  
For those with taste, here is a recipe of filet mignon with olive oil.

## Recipe Screen

After clicking on a category the user is brought to a list of recipe items.





## Recipe Screen

Clicking on a recipe brings you to a recipe page with ingredients and instructions.

**BACK** Recipe Finder COOC

**Search**

Type in part of a name of the dish, ingredient or any key word to search our extensive olive oil recipe database.

Name

Ingredient

Exclude These Ingredients

Ethnicity

All

Type (Breakfast, Salad)

All

Restrictions ie Vegan, Vegetarian

None

Clear All Search

## Recipe Screen

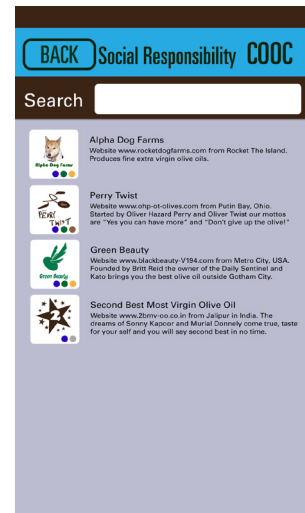
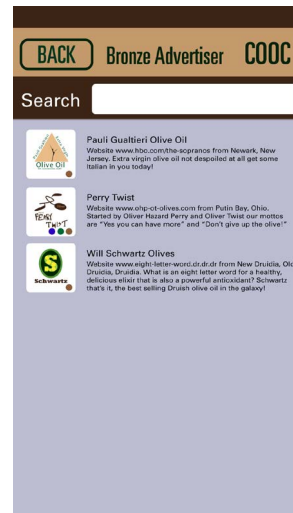
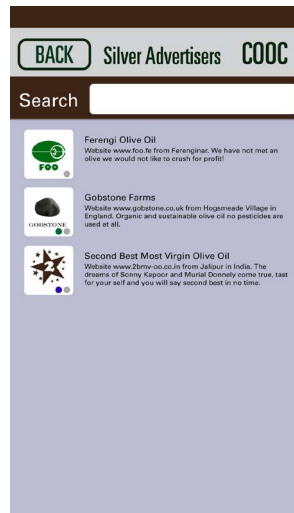
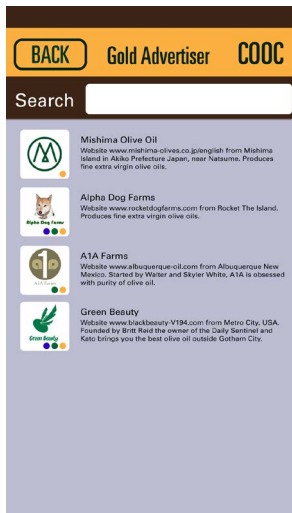
Clicking search brings up this menu to look for recipes.

# Meet the Producers (optional, generates revenue)



When the user clicks on Meet the Producers they are brought to a page with various levels of producer. In order to generate more revenue for the California Olive Oil Council there will be different levels of advertising that will charge an upkeep fee to be on the list. There are two levels that cannot be paid for Green and Blue which are for environmentally friendly and socially responsible producers and requires documentation. Then there is all COOC member list.

# RFID Tag and App



The above screens show various filters for searching for olive oil producers. There are little dots on the bottom right side of the logo to indicate a particular type, advertiser

being gold, silver, bronze, and blue and green for social and environmental responsibility.



## Producer

When one clicks on search they are brought to this search page to look for by name location or other criteria.



## Producer

After clicking on a producer one is brought to the producers page on the app with a view of the area and a glamour shot of the product.

BACK

Producers

COOC

Ferengi Olive Oil



Welcome human, taste the slimiest olive oil in the galaxy. For a mere 10 latinum bars you can enjoy as much as 2.8 ounces of pure olive oil joy. The only olive oil bottle that levitates, take that to the bank.

TEST RESULTS

Details

Producer

Origin of Olives

Seal Granted

Rating

Website

Ferengi Olive Oil

Ferenginar

NOT

Not Virgin

www.foo.fe

# Test Results (optional)

There are Test Results links on the profile pages of the olive oils that are listed. When the user clicks on the Test Results button they are brought to the next screen on the next page.

BACK

Producers

COOC

Pauli Gaultieri Olive Oil





Welcome to Pauli Gaultieri's olive oil page, a dedication to all things Italian like the telephone, the telescope, pasta, Boofalo Mozzarella, Espresso and the main one Olive Oil. Why not celebrate Christophoro Colombo Day with a flask of olive oil on your salad?

TEST RESULTS

Details

Producer

Origin of Olives

Seal Granted

Rating

Website

Pauli Gaultieri Olive Oil

Newark NJ

2015

Extra Virgin Certified

www.hbo.com/the-sopranos

BACK

SCAN RESULTS

COOC

Mishima 三島オリブ株式会社



Producer	Mishima Corporation
Batch ID	2015-000632
Harvest Date	8-2015
Best By	8-2017
Origin of Olives	Mishima, Japan
Seal Granted	2015
Rating	Extra Virgin Certified
Website	mishima-olive.co.jp/english

Test Results

Farm to Table

Fraud Reporting

Does this information match what is on the bottle you scanned? If not this may be fraud, please inform store management and click on this link to report bad olive oil.

REPORT FRAUD



# RFID Tag and App


BACK

Test Results

COOC

Pauli Gaultieri Olive Oil

PASS 3/3



This olive oil passes all the tests and is not adulterated and is of high quality and meets all standards. Unconditionally certified as Extra Virgin.

Chemical Tests

DAGS & PPP

PASS

DAGS ( $\geq 40.0$ )

Pass 61.9

PPP ( $\leq 15.0$ )

Pass 4.3

Sterols

PASS

C18:3 ( $\leq 1.5$ )

Pass 0.8

Brassicasterol ( $\leq 0.1$ )

Pass <0.05

Campesterol ( $\leq 4.5$ )

Pass 4.0

Betasitosterol ( $\geq 93.0$ )

Pass 94.3

Stigmastadiene ( $\leq 0.15$ )

Pass <0.03

Sensory Panels

PASS (3/3 Pass)

## Good Olive Oil (optional)

Shown on the left is a good result for an olive oil test that passes all criteria including diacylglycerols (DAGs) pyropheophytin (PPP), sensory tests, and sterol tests.

# Marginal Olive Oil

(optional)

Shown on the left is a semi passing result for an olive oil test that passes all criteria except DAGs and PPP. This passes one of the three criteria.


[BACK](#)

Test Results

COOC

Mishima Corporation

PASS 1/3



These olive oils are not likely adulterated however the quality of the oil is marginal and possibly old or oxidized or poor quality olives included.

Chemical Tests

DAGS & PPP

FAIL

DAGS ( $\geq 40.0$ )

Fail 37.3

PPP ( $\leq 15.0$ )

Fail 18.8

Sterols

PASS

C18:3 ( $\leq 1.5$ )

Pass 0.7

Brassicasterol ( $\leq 0.1$ )

Pass <0.05

Campesterol ( $\leq 4.5$ )

Pass 3.2

Betasitosterol ( $\geq 93.0$ )

Pass 94.9

Stigmastadiene ( $\leq 0.15$ )

Pass <0.03

Sensory Panels

FAIL (0/3 Pass)

Rancid and musty faults detected.

# RFID Tag and App


BACK

Test Results

COOC

Ferengi Olive Oil

FAIL



This olive oil is adulterated and uses old olives and or bad olives. This is not virgin or extra virgin. However quality improves with each new acquisition.

Chemical Tests

DAGS & PPP

FAIL

DAGS ( $\geq 40.0$ )

Fail 29.7

PPP ( $\leq 15.0$ )

Fail 24.9

Sterols

FAIL

C18:3 ( $\leq 1.5$ )

Fail 2.0

Brassicasterol ( $\leq 0.1$ )

Fail 3.13

Campesterol ( $\leq 4.5$ )

Fail 12.9

Betasitosterol ( $\geq 93.0$ )

Fail 81.3

Stigmastadiene ( $\leq 0.15$ )

Fail 24.24

Sensory Panels

FAIL (0/3 Pass)

Taste descriptors baby diapers, sweaty gym clothes, moldy, musty and old.

## Defective Olive Oil

(optional)

This olive oil does not pass any of the criteria and is not certified.

BACKSCAN RESULTSCOOC

Mishima

三島オリブ株式会社

Producer

Batch ID

Harvest Date

Best By

Origin of Olives

Seal Granted

Rating

Website

Mishima Corporation

2015-000632

8-2015

8-2017

Mishima, Japan

2015

Extra Virgin Certified

mishima-olive.co.jp/english

Test Results

Farm to Table

Fraud Reporting

Does this information match what is on the bottle you scanned? If not this may be fraud, please inform store management and click on this link to report bad olive oil.

REPORT FRAUD

BACKSCAN RESULTSCOOC

ERROR

There has been an error in scanning this seal, it is not an approved Cooc Seal.

Fraud Reporting

Does this purport to be a Cooc seal or misrepresent itself as an official label for the Cooc? If so report it here.

REPORT FRAUD

Screens showing the possible outcomes of a scan with genuine or questionable results.



# RFID Tag and App

BACK

Producer to Table

COOC

Mishima Corporation

Google Map

Olive Oil Tracking Edition

Mishima, Ishikawa, Japan

Tokyo, Japan

Los Angeles, CA, USA

Batch ID

2015-000632

Intended for Sale at

Olio Store

888 Sunset Blvd, Hollywood, CA

Harvest Date

8-2015

Left Mishima

8-13-2015

Left Tokyo

8-15-2015

Los Angeles Distributor

8-20-2015

Arrived at Olio Store

8-25-2015

Fraud Reporting

Is this not the correct store or is there discrepancies in the information here and what is advertised?

REPORT FRAUD

## Food Security & Tracking (optional)

A sample screen showing tracking on an olive oil shipment. This helps cut down on fraud by tracking every legitimate shipment to cut down on fraud as much as possible and increase food security.

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## Options for the labels

If a producer sells olive oil in a large container as opposed to individually packed bottles. There can be one sticker that is cloned onto a sticker sheet of seals with the same ID for tracking. One sticker is placed on the container for tracking, the rest are applied to the bottles that are filled for the customer.

If a producer sells one or more boxes of bottles to one store. There can be a cloned sticker sheet for each box of bottles where the ids on each bottle are the same. One sticker is applied to the box, the rest to each bottle at any stage of distribution.

If a producer sells pallets to a store they can use multiple sheet of cloned id stickers. The sticker will be applied to the exterior of the pallet.

# Technical Details

## Security through Unique Encrypted IDs

Serial Number Format EPC RFID Gen 2v2

01 • 000C00C • 0007F6 • 00000FF

Version COOC ID Producer ID Product ID

Number Generation:

When an olive oil seal is manufactured the Producer ID is set and each seal is run with a unique product id. Of course the producers and product ids will not be incremental as 1,2,3. There will be a geometric check-summed algorithm whereas the id will always checksum to the last digit.

Producer code: check digit is the country code mod 16 (0-F)h. The number is all the numbers added up then mod 16 to equal the checksum.

Product code: check digits is the last two digits of the year mod 16.

Greece = 1, Italy = 2, Spain = 3, France=4, USA = 5, Japan = 6, Australia = 7.

If the checksum on the label is not correct then the label is fraudulent.

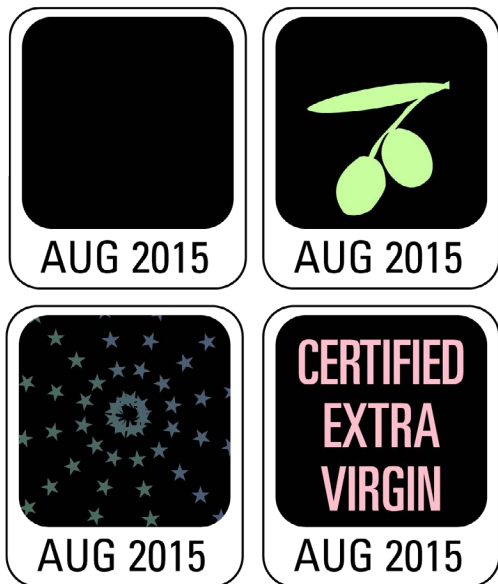
The app will detect fraudulent labels.

Sample Producer Codes in Order

USA produced 000055h = 5h = 5 % 16 =5  
000145h = 1h + 4h =5h= 5%16 = 5  
000235h = 2h + 3h =5h= 5%16 = 5  
000325h = 3h + 2h =5h= 5%16 = 5  
000415h = 4h + 1h =5h= 5%16 = 5  
000505h = 5h= 5%16 = 5  
0006F5h = 6h + Fh = 21%16 = 5  
0007E5h = 7h + Eh = 21%16 = 5

# Additional Security

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## Holograms (optional)

Using a three layer hologram we can increase the difficulty in reproducing our seal and make soaking off the seal difficult because soaking will damage the hologram reducing reuse.



## Producer's Name

(optional)

Printing the producers name on the seal can reduce fraudulent reuse of the olive oil seal by others.



# Benefits

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These articles below show a disturbing increase in food fraud where people are deliberately labeling one kind of food as another and misleading people. As consumers we see this apparently unabated criminality as a sign that the FDA and the USDA are not doing their jobs so our confidence in our food diminishes. This hurts producers and prices of olive oil making a measurable impact on the olive oil industry as a whole. By making olive oil less susceptible to fraud we will increase the amount of money that producers can make with legitimate olive oil. The benefit of this can be in the millions of dollars and long term be well worth any investment.

The FDA and USDA can be pressured by consumers movements to help national security by passing regulations for labels and adding certification requirements to use certain words on food labels such as regulating the term Extra Virgin to include a certification requirement.

Links to fake olive oil articles:

<http://www.foodrenegade.com/how-tell-if-your-olive-oil-fake/>

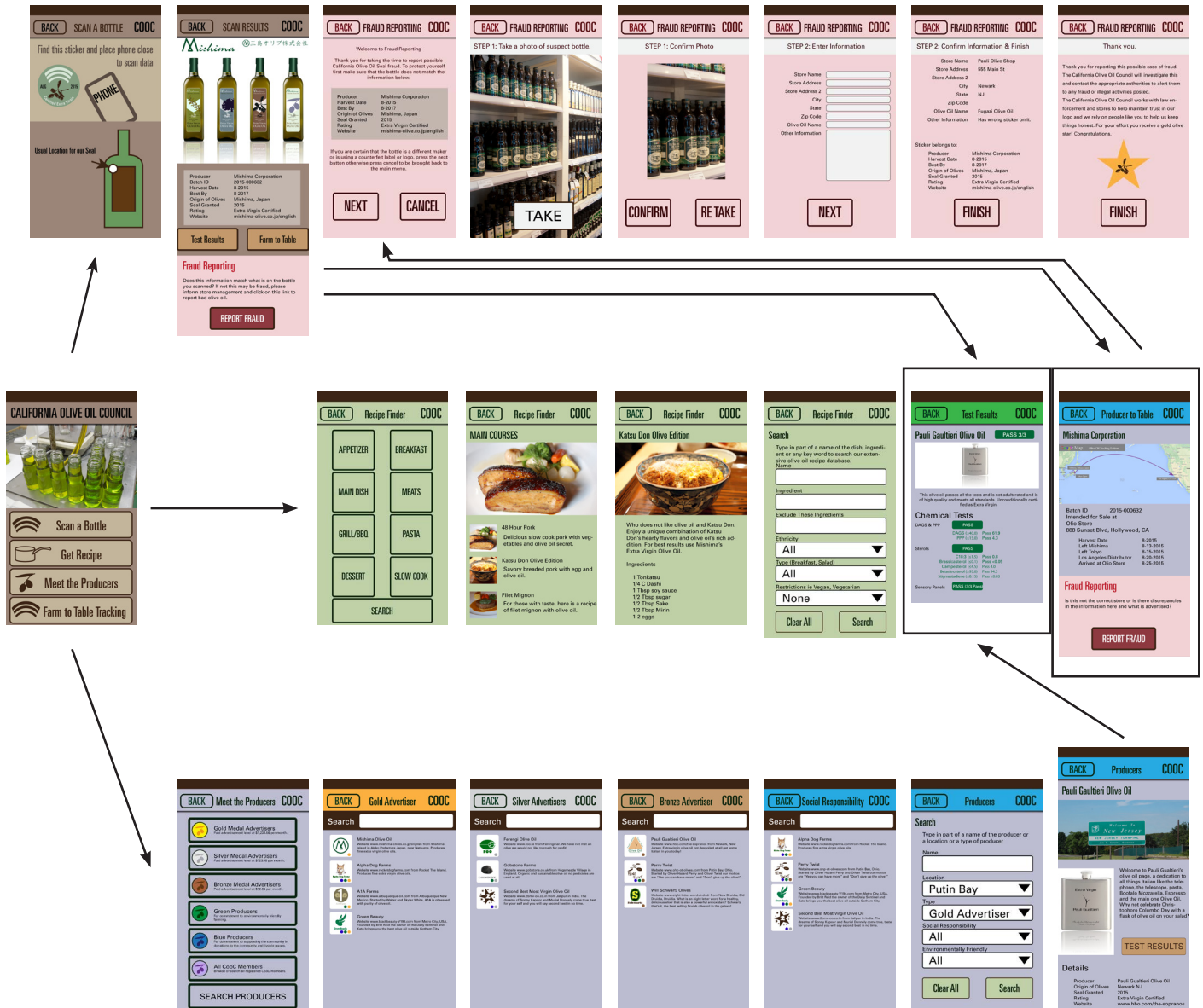
Food Fraud:

<http://articles.mercola.com/sites/articles/archive/2013/05/04/food-fraud.aspx>

More Fraud:

<http://foodidentitytheft.com/food-fraud-comes-in-two-varieties-illicit-and-officially-permitted/>

# App Screen Chart



# Costs

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This app is very customized and requires database work as well as custom UI and security. There is camera function as well as search and administration functions on the app. The estimated cost for these on the three platforms will be \$175,000 includes Android, Windows, iPhone.

Competitors quotes:

<https://www.otreva.com/calculator/#>

<http://apestimator.tusnuadesigns.net/>

<http://www.kinvey.com/app-cost-estimator>

<http://www.formotus.com/14018/blog-mobility/figuring-the-costs-of-custom-mobile-business-app-development>

The RFID antennae on the seal costs less than 5 cents each.

Hologram costs

<http://www.zebraimaging.com/pricing/>

# Credits

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California Olive Oil Council for old logos.

Various olive oil stores for the comparative logos on pages 4 and 5.

Apple and Sony for illustrations of their phones on page 7.

Takao for photos of farm on page 7 and olive oil bottle on page 8.

ABC for the still of the Brady Bunch on page 7.

Cortopassi Farms for the 4 bottles on page 8, Mishima label Design is by Brian Imagawa.

Acme for the flask on page 12, the design for Pauli Olive Oil is by Brian Imagawa.

All other photos, illustrations and designs are original Brian Imagawa works.



# Little Gallery

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*Green Beauty*



A1A Farms

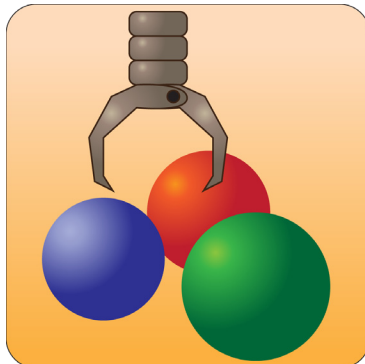


GOBSTONE



**Schwartz**





# Thank you.

