

SOFTWARE ENGINEERING

Chapter 3.4: GUI Design Patterns
Part II

MOTIVATION

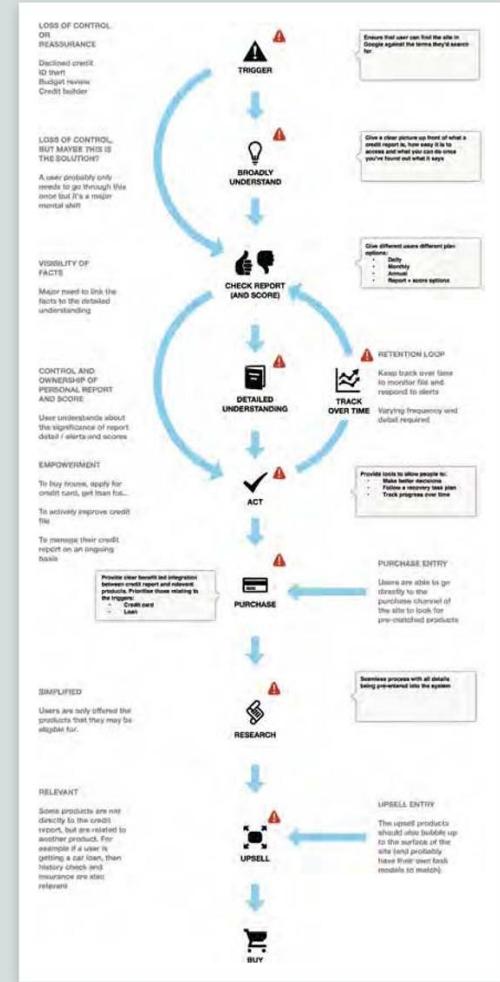
“How well we communicate is determined not by how well we say things, but how well we are understood.”

Andrew Grove

GUI DESIGN PATTERNS

They provide a guideline to design certain features of your software.

They're easy to follow and they become from tracking successful software examples!



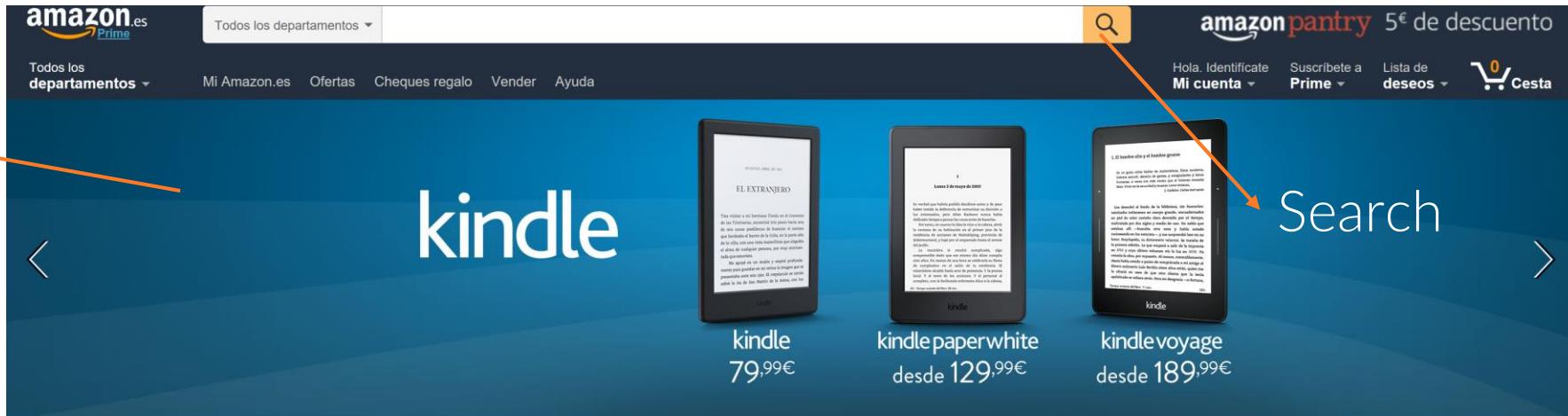
Mapping users' behavior will help you see how to organize your software.

TOP 10:

- 1) Feature, Search and Browse
- 2) Data Stream
- 3) Picture (Or Multimedia) Manager
- 4) Dashboard
- 5) Canvas + Palette
- 6) Wizard
- 7) Settings Editor
- 8) Alternative Views
- 9) Many Workspaces
- 10) Multi-Level Help

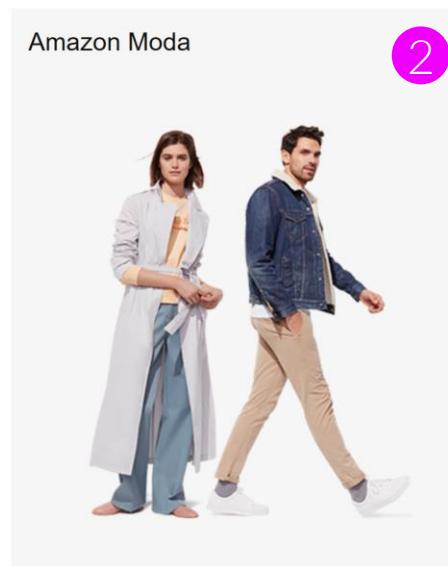
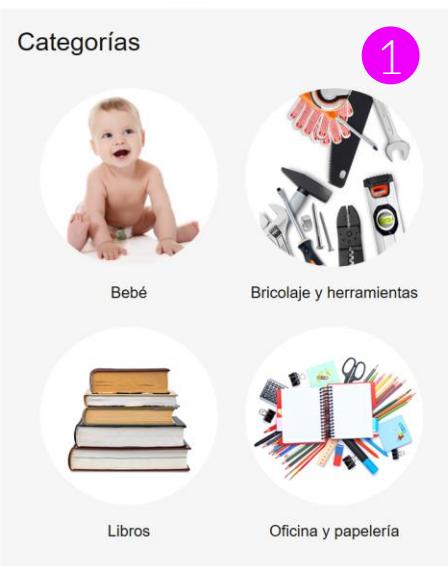
1) Feature, Search and Browse

Feature



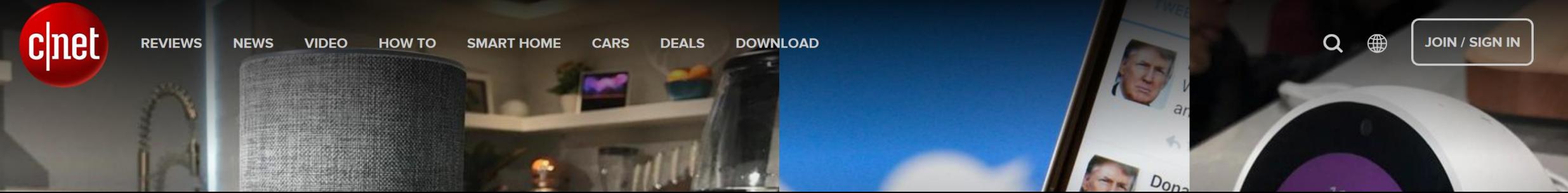
Search

■ Browse



CNET BEST PRODUCTS

Best Tablets of 2017

[LEARN MORE](#)

Best Used:

When your site offers long lists of products, articles, news or multimedia.

You want to encourage your user giving him/her something useful to see.

Featured items may HOOK your users!

Complications:

Placing search and browse elements

Hint:

Set priorities!! Giving more importance to features, browsing or searching depends on your project!

Sign up
Log in

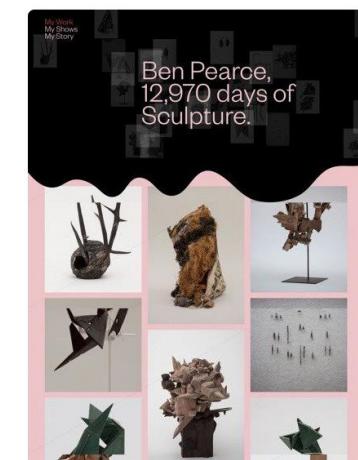
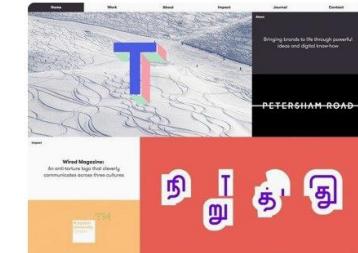
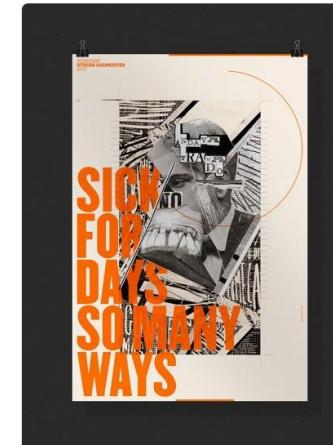
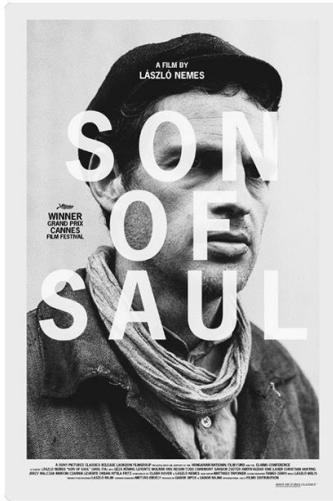
Discover

Everything
Popular
Random

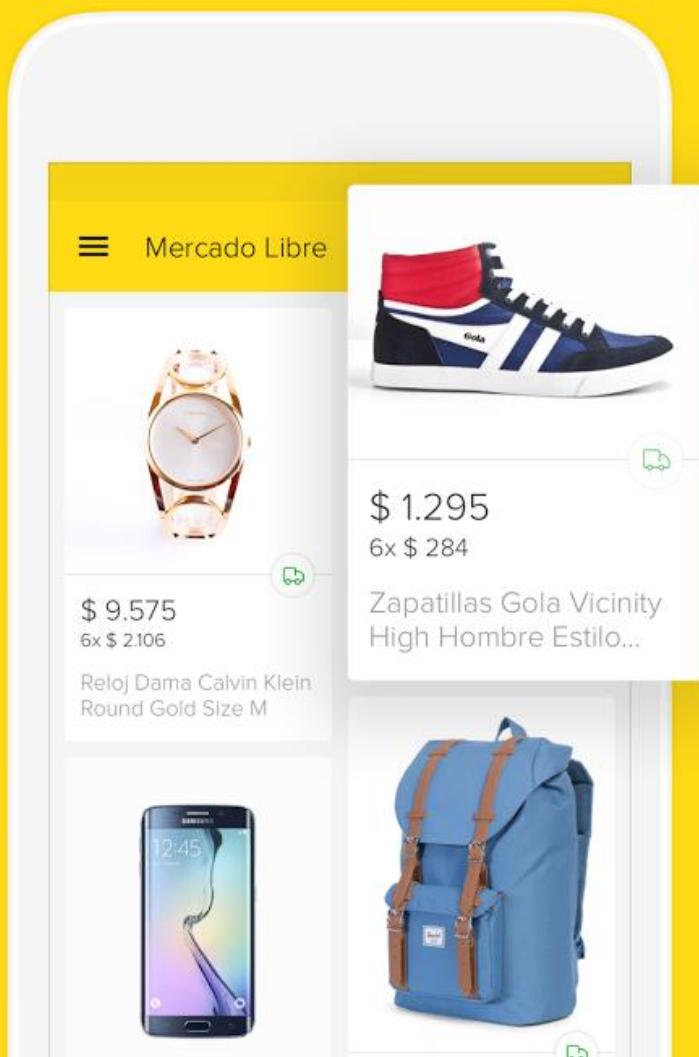
About
Shop Products
Blog
RSS



Hosted by (mnt)

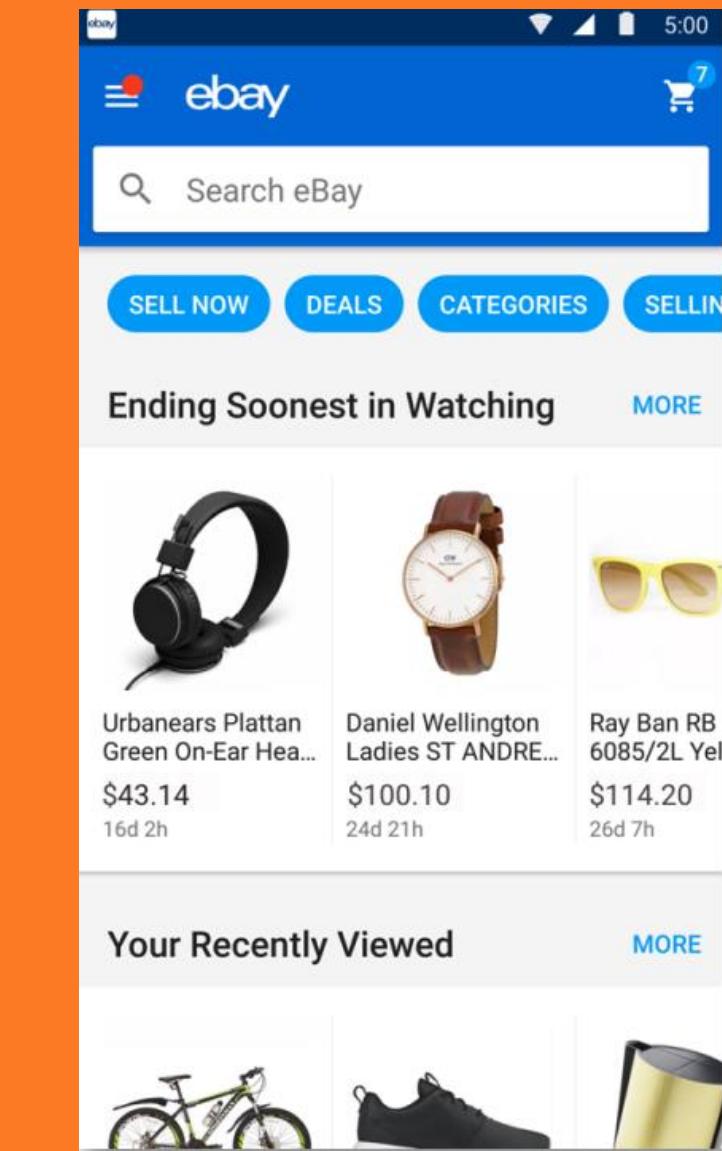


Descubre un montón
de marcas y productos



Other examples

See some
examples in
mobile
development



2) Information Stream

Search for people, places and things

Update Status Add Photos/Video Create Photo Album

What's on your mind?

[REDACTED] was tagged in a post.

 A screenshot from Google Street View showing a man in a white t-shirt pointing a handgun at another man who is inside a silver car. The background shows a residential area with houses and trees.

New - Kid getting SHOT on Google Earth: Street View
294,399 people shared this
LUCKYTERMINOLOG.PHRENOLOGY.BE

Like · Comment

Harper Lee · Trending

 A black and white photograph of Gregory Peck as Atticus Finch from the 1962 film "To Kill a Mockingbird". He is wearing glasses and a suit, looking off to the side.

Jillian Home

YOUR PAGES

4 events this week

Jessica Hebert and 1 other

TRENDING

- Channing Tatum: Actor shares provocative poster for movie sequel 'Magic Mike XXL'
- Metro-North Railroad: 7 people killed after New York commuter train crashes into SUV on the tracks
- Amber Heard: Actress reportedly will marry actor Johnny Depp this weekend

See More

Sponsored

Create Advert

 An advertisement for Sheinside featuring three women modeling different styles of dresses. The text includes "sheinside", "BUY 1 GET 1 50% OFF", and "UP TO 60% OFF+FREE SHIPPING! BUY 1 GET 1 50% OFF! Extra 20% OFF 1st Order!"

 Two bras are displayed, one black and one white, against a dark background.

Best. Lingerie. Ever.
adoreme.com
Lucinda - \$39.95 Free Shipping! Free Exchanges!

GROUP CONVERSATIONS

Sarah, Gabby, Amanda

Sarah, Gabby, Jillian

Search

Cerca de 43,100,000 resultados (0.78 segundos)

[Noticias anime – Kemono Friends, Kekkai Sensen, Mazinger Z y ...](#)

Revista Yume (Comunicado de prensa) (Registro) (blog) - hace 20 horas

El director del anime Kemono Friends, TATSUKI, reveló que ya no está a cargo de la mencionada franquicia anime. Según comentaba el ...

Best Used:

When you need to track events over time.

Those pages are often links to other screens of your product.

Works best with communication channels (blogs, news, forums...)

Complications:

Choosing between this and browse

Hint:

Sometimes you can mix this with a browser, by placing the browser at the total left or right of your site

Another example:

Home Connect Discover

Venkat View my profile page

4,167 TWEETS 1,486 FOLLOWING 1,341 FOLLOWERS

Compose new Tweet...

Who to follow · Refresh · View all

- Klout @klout Followed by Graham Cluley and o... Follow
- CEO of Great Innovus @dollars5 Follow
- Leo Babauta @zen_habits Followed by Lilian Chisca and oth... Follow

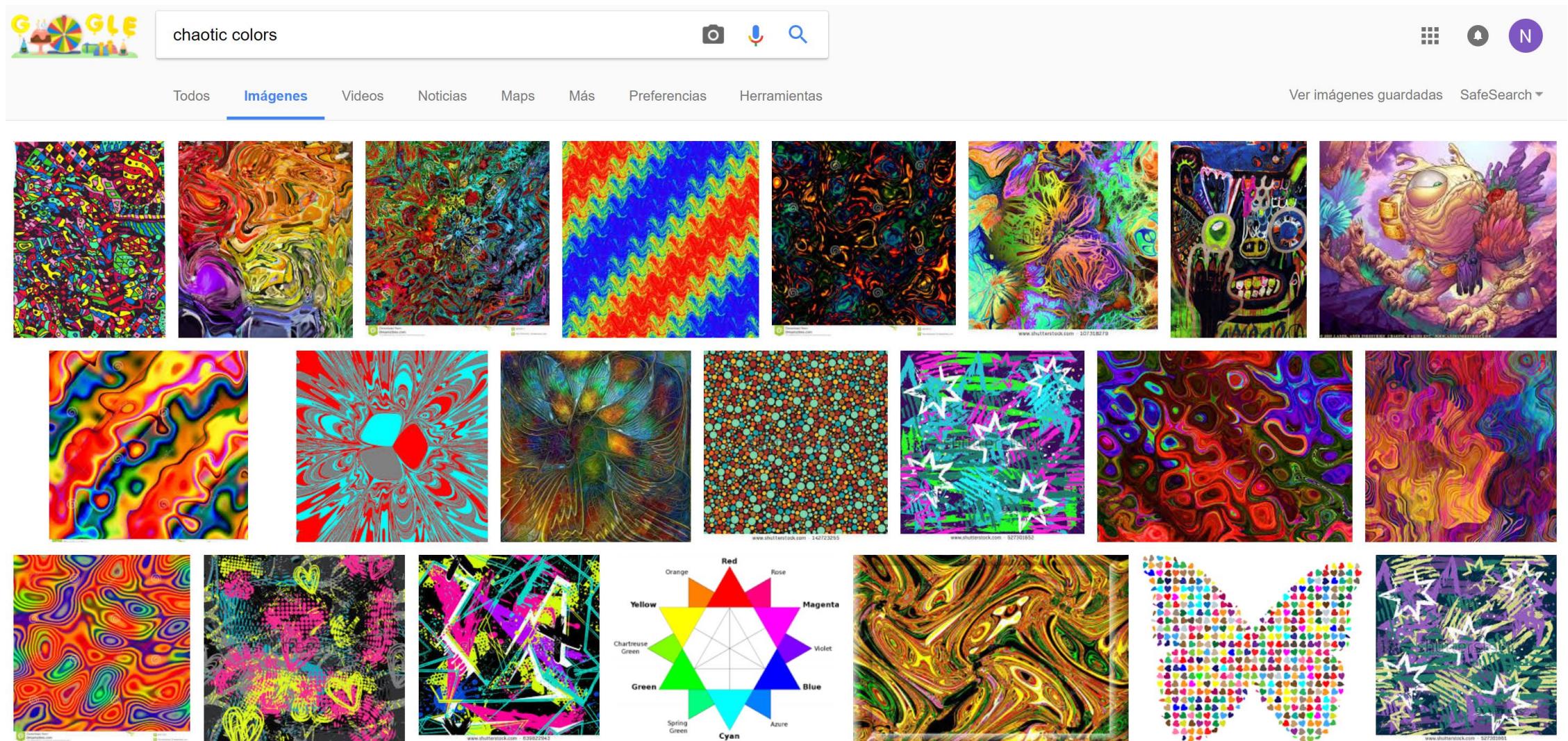
India trends · Change

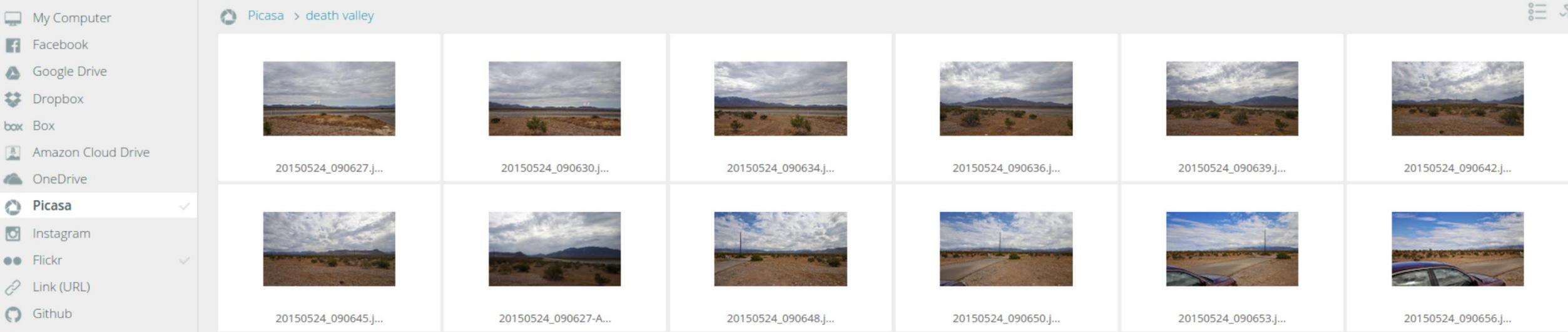
- Why QR Codes Won't Last
- #YouNeedToBreakUpIfl
- #CongressComics
- #BMCElections
- Rs 444
- Honduras
- Skin Cancer

Tweets

- FUNNYPICS** @FUNNYPICS 16s
Damn Amber!!! Wiz ain't hittin that right... #ThirstHour twitpic.com/8ki5yv
- Ben S.** @5eo 57s
Triple AdSense Revenue In Minutes - bit.ly/17y4o9
- Chad Choron** @ChadChoron 1m
Discover hidden features in the Windows 7 Default Programs tool techrepublic.com/blog/window-on...
- CNN** @CNN 2m
CNN Freedom Project: Children of the trash dump. (via @AllenCNN) on.cnn.com/zXM43Y
- iPhone & iPad Fans** @iPhoneiPadFans 2m
iPad 3: Which Features Do You Want? [POLL] bit.ly/xDRCZ5
- Ashutosh** @ashutoshdave 2m
#ifttt rock!! Puts the internet to work !!
- Droid Guy** @thedroidguy 2m
Battery life improved in #Google Maps, more here: goo.gl/2GB7i

3) Picture Manager





Best Used:

When you have to manage different multimedia files.

When the interaction between the multimedia files and the user is the most important thing!

Complications:

Knowing when to use tiles, grid, isolation and/or search

Hint:

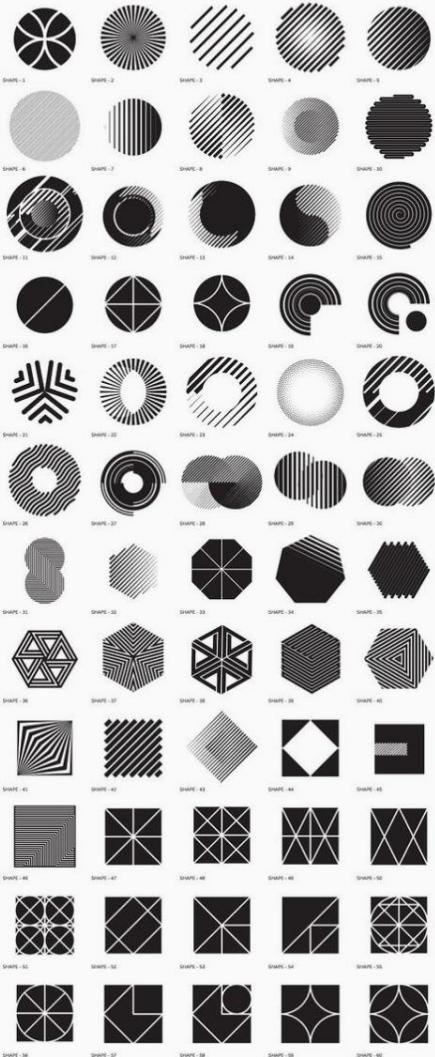
Model or design different solutions, decide what you see fits the best!
Normally only setting a thumbnail view + zoom (isolation) works



Buscar

Inicio

Nikolaz

[100] UNIVERSAL SHAPES FOR DESIGN
ALL ORIGINAL ELEMENTS ARE IN FORMATS: [AI, EPS, JPG, PNG]

3
NUTRITION TIPS
for GLOWING,
GORGEOUS SKIN



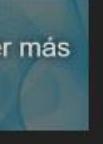




Technologies. Abstract blue background ...
VideoBlocks.com - 4096 x 2160 - Buscar por imágenes
Abstract blue background with points and lines. Rotating around. Abstract vector mesh background. Futuristic technology style.

[Ver](#) [Ver imagen](#) [Guardar](#) [Ver imágenes guardadas](#) [Compartir](#)

Imágenes relacionadas:



[Ver más](#)

Las imágenes pueden estar sujetas a derechos de autor. - Obtener ayuda - Enviar comentarios

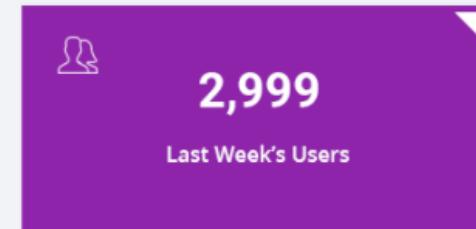


4) Dashboard

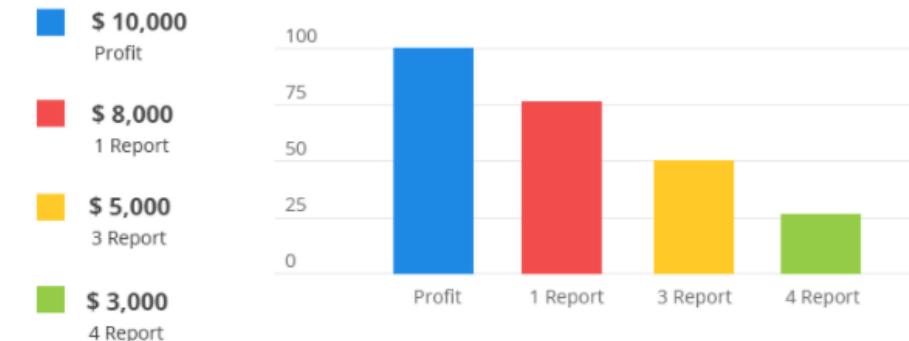


- Dashboard
- Products
- Favourite
- Order List
- Booking System
- Upload Menu
- Charts
- Calendar
- UI Elements
- Forms

Home - Dashboard_01



Earning Graph



Best Used:

When displaying information or managing pages is required

- Data visualization
- Profile Management
- Administrator Views

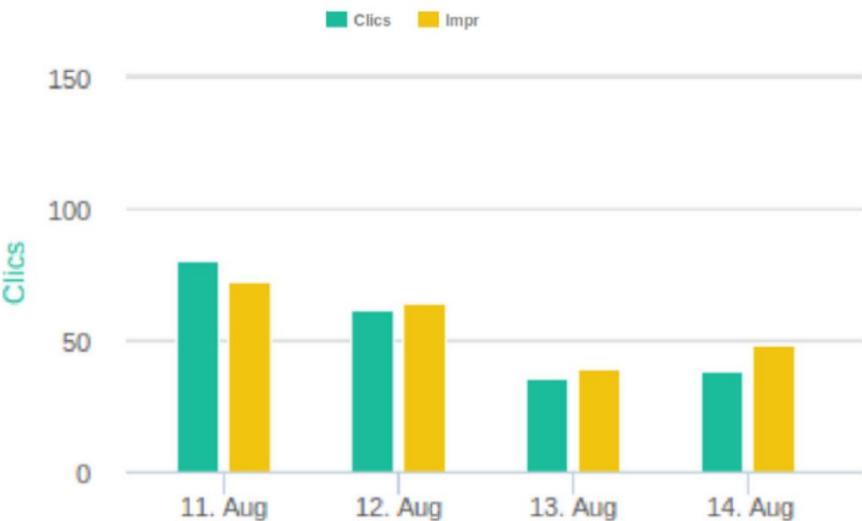
Complications:

Organizing the data by priorities, you need to know what the user wants to see!

Hint:

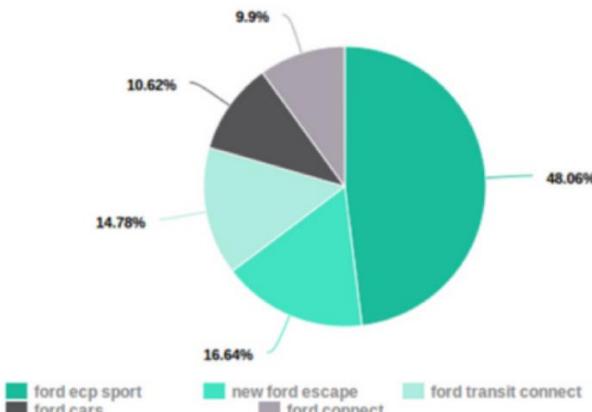
Use titled sections and windows to highlight information, you can also add customization features

- Reports
- Dashboards
- Clients
- Contacts
- Tasks
- Portal
- Scheduled Reports
- Templates
- Accounts
- Mobile



- Bar Chart
- Overview
- Text
- Image
- Pie Chart
- Page Break
- Cover Page
- Stack Bar Chart
- Map

Top Campaigns By Clicks

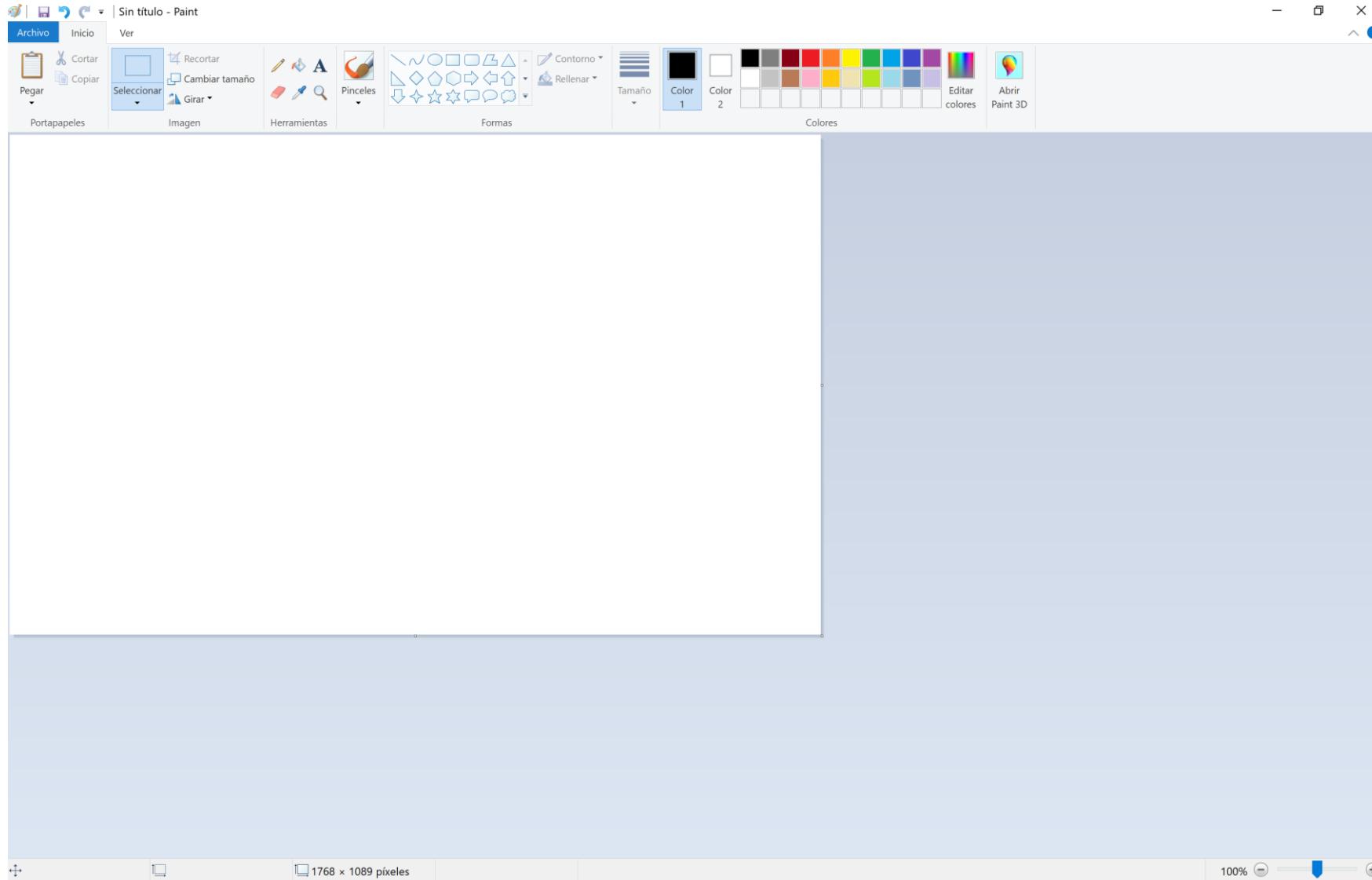


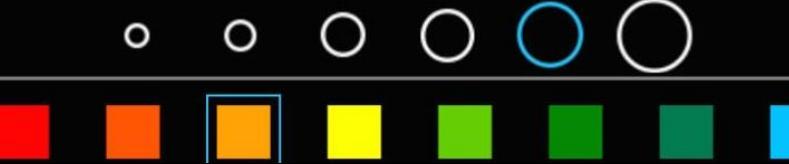
Top Keywords

	Clicks	Impressions	CTR (%)	Average CPC (\$)	Cost (\$)
ford mustang	55	223	24.66	1.52	83.54
ford figo	47	1,005	4.68	4.56	214.35
ford cars	41	199	20.60	3.63	148.81
ford focus	35	319	10.97	0.87	30.29
brand ford	26	106	24.53	1.03	26.78
local ford cars	22	815	2.70	6.82	150.12
ford second cars	20	457	4.38	2.39	47.72
ford cars usa	20	546	3.66	3.43	68.64

Dashboard Example with data and browsing features!

5) Canvas and Palette





Best Used:

When edition, or direct manipulation of content is required.

- Video edition
- Photo Edition
- Drawing, Content Creation

Complications:

Managing how to place functionalities

Hint:

Place the canvas as the biggest object in the space, place the tools with bars separated by functionality
Be explicit with your icons!

▼ Navigator FIT FILL 1:1 3:1 ▾



▼ Presets +

- ▶ Lightroom B&W Filter Presets
- ▶ Lightroom B&W Presets
- ▶ Lightroom B&W Toned Presets
- ▼ Lightroom Color Presets
 - ☒ Aged Photo
 - ☒ Bleach Bypass
 - ☒ Cold Tone
 - ☒ Cross Process 1
 - ☒ Cross Process 2
 - ☒ Cross Process 3
 - ☒ Direct Positive
 - ☒ Old Polar
 - ☒ Yesteryear
- ▼ Lightroom Effect Presets
 - ☒ Grain - Heavy
 - ☒ Grain - Light
 - ☒ Grain - Medium
 - ☒ Rounded Corners Black
 - ☒ Rounded Corners White

Copy...

Paste

Tool Overlay: Always ▾

Visualize Spots ▾

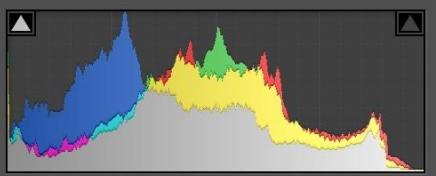
Done

Previous

Reset



Histogram ▾



Original Photo

Brush : Clone | Heal

Size 49
Opacity 100

Reset | Close

Basic ▾

Treatment : Color | Black & White

 WB : As Shot ▾
Temp 5850
Tint + 6

Tone Auto
Exposure + 0.45
Contrast + 36
Highlights + 65
Shadows + 13
Whites 0
Blacks - 20

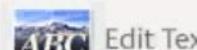
Presence
Clarity 0
Vibrance + 48

[Back to Library](#)[Play](#)

Basic Fixes

Tuning

Effects



Edit Text

Font: Arial

Size: 96

B*I*U

Alignment:



Transparency

[Copy Caption](#)[Clear All](#)[Apply](#)[Cancel](#)

Histogram & Camera Information



FUJIFILM FinePix S2750HD 1/60s
Focal Length: 12.3mm f/4.2
(35 mm equivalent: 141mm) ISO: 200



DSCF1647.JPG 01/10/2011 13:49:36 2048x1536 pixels 783 KB



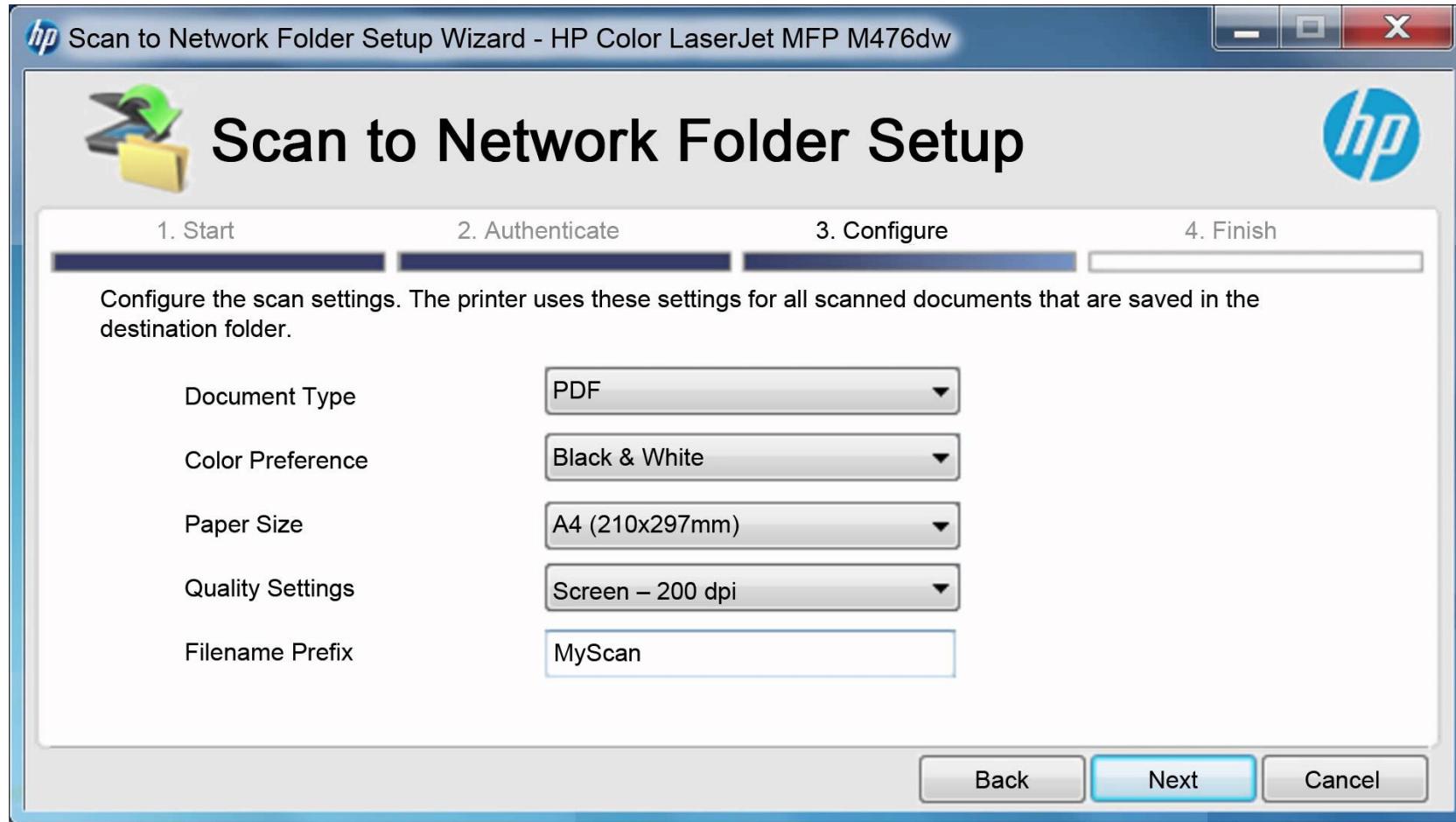
EN

19:53

13/10/2011



6) Wizard



Step 1
Find your friends

Step 2
Add Profile Pic

Are your friends already on Facebook?

Many of your friends may already be here. Searching your email account is the fastest way to find your friends on Facebook. See [how it works.](#)

Best Used:

When functionality is a ordered sequence of steps (step1, step2...)

When the user can have a hard time using the product:

Set-ups, orders, importing data...

Complications:

Giving the correct amount of help and steps.

Hint:

Design each step and see if they're not too many

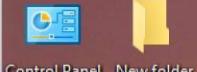
Be restrictive with the interaction on each step!



Recycle Bin Windows



This PC CINEBENCH...



Control Panel New folder



Network



tnelson



Logitech Vid HD



Logitech Webcam...



Skype



TeamViewer 8



Parallels Share...

Parallels Wizard

New Virtual Machine

Get Windows 10 from Microsoft

Install Windows or another OS from a DVD or image file

Migrate Windows from a PC

Modern.IE Test Environments

Download Chrome OS

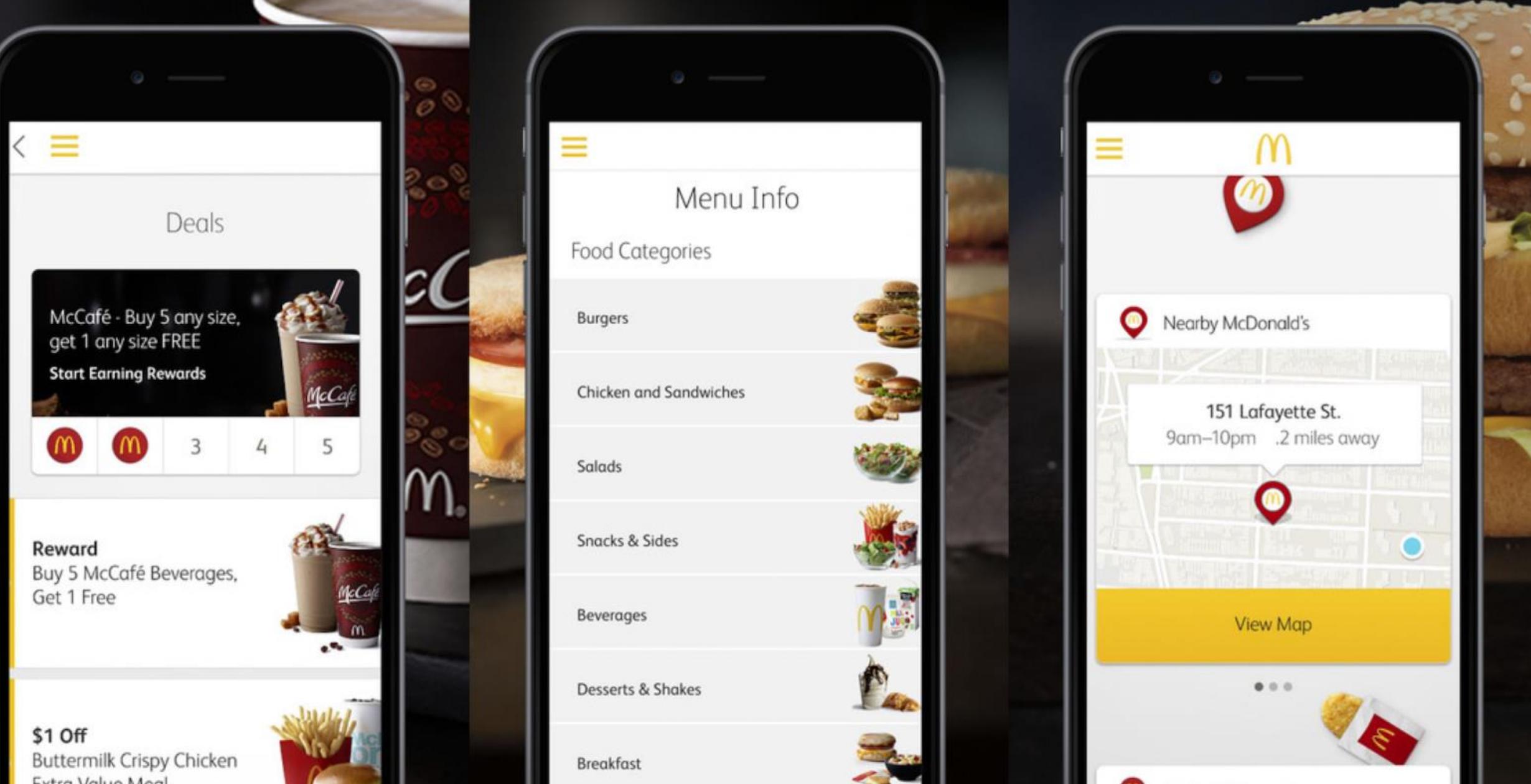
Download Ubuntu

Download Android

Download iOS

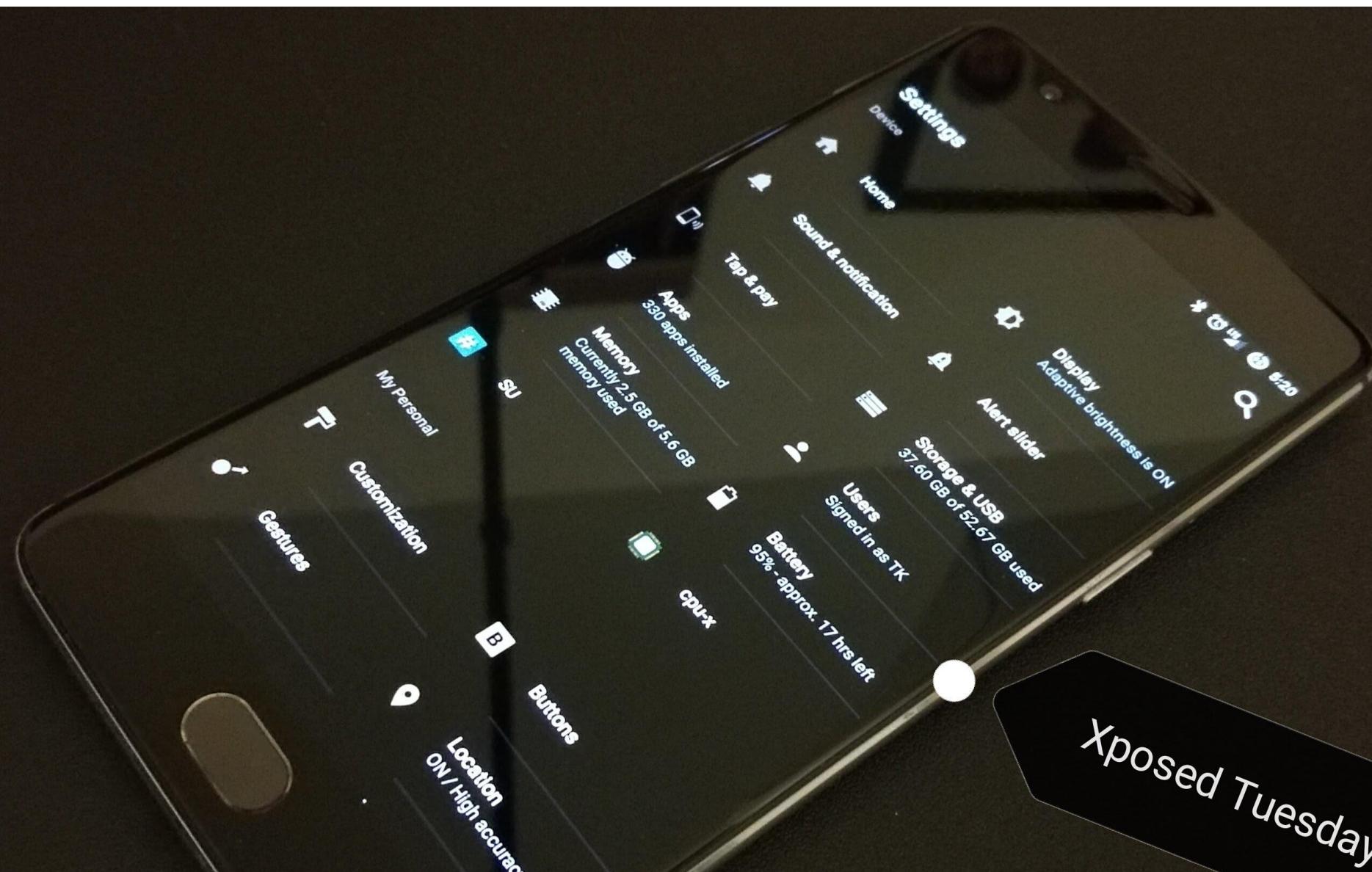
Add Existing Virtual Machine

Continue



Combination between wizard and browsing!

7) Settings Editor

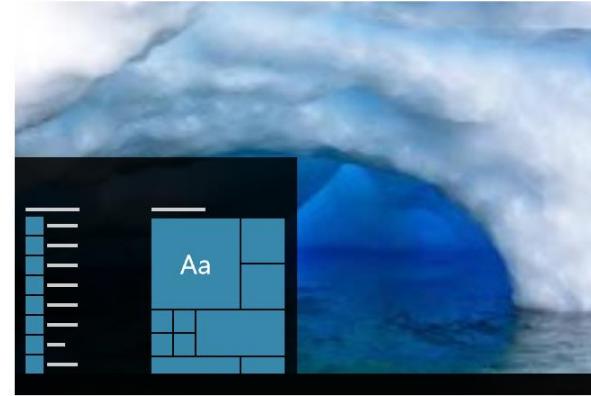


Xposed Tuesdays

Buscar una opción de configuración 

Temas

Tema actual: Frozen Formations



Personalización

 Fondo Colores Pantalla de bloqueo Temas

Configuración relacionada

[Configuración de iconos de escritorio](#)

¿Tienes alguna pregunta?

[Obtener ayuda](#)

Mejorar Windows.

[Envíanos tus comentarios](#) Fondo
Presentación (12 imágenes) Color
Aguamarina Sonidos
Predeterminado de Windows Cursor del mouse
Windows Aero

Best Used:

When you need to change settings of your software.

Customization is also another use for this kind of pattern

Complications:

The layout can become complex and this pattern is too easy to overdo!

Hint:

Make the configuration findable
Every icon and phrase must be accurate!
This screens tend to change the behavior of the system

8) Alternative Views



13

Best Used:
When you have to manage different multimedia files.

Complications:
Knowing when to use tiles, grid, isolation and/or search

Hint:
Model or design different solutions, decide what you see fits the best!
Normally only setting a thumbnail view + zoom (isolation) works

14

15

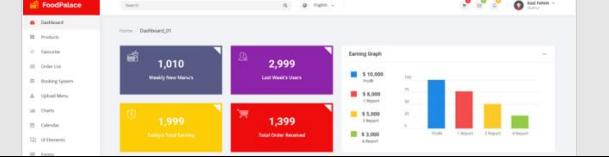
Relleno

- Relleno sólido
- Relleno con degradado
- Relleno con imagen o textura
- Relleno de trama
- Ocultar gráficos del fondo

Color

Transparencia

4) Dashboard



Best Used:

When users need to see different perspectives of the same situation.

When the system cannot incorporate this feature in the normal use scenario.

Complications:

Knowing which are the views that really need to give that additional information

Hint:

Sketch different perspectives of data, see when it's necessary to add a different view or isolate a complex feature



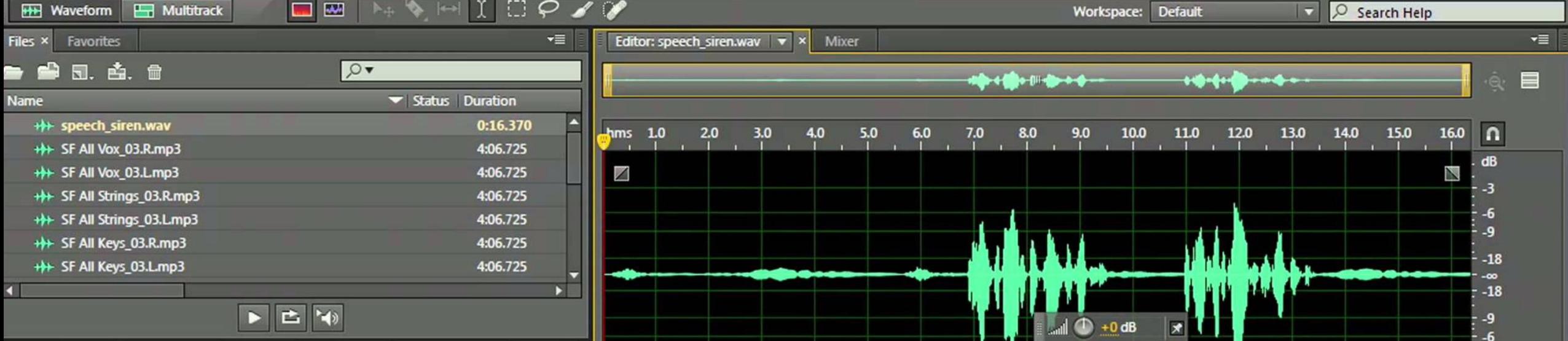
9) Many Workspaces

The Birthday Massacre - Games (Album Under Your Spell 2017)

A continuación REPRODUCCIÓN AUTOMÁTICA

- 
The Birthday Massacre - All of Nothing (Album Under Your Spell)
schmerzaug Bletz
29k vistas
- 
Mix: The Birthday Massacre - Games (Album Under Your Spell)
YouTube
- 
The Birthday Massacre - The Lowest Low (Album Under Your Spell)
schmerzaug Bletz
19k vistas
- 
The Birthday Massacre - Without You (Album Under Your Spell)
schmerzaug Bletz
14k vistas
- 
The Calm Blue Sea - The Calm Blue Sea (Full Album)
9eCn3
Recomendado para ti

Each tab is a new workspace in Google Chrome!



Best Used:

People multitask, if your product is a set of different tasks consider the usage of tabs or multiple windows.

Complications:

Knowing how to isolate tasks properly and how to make the scenarios look modular

Hint:

Try using tabs and parallelized windows and evaluate if you switch tabs or use simultaneously those windows. Trial and Error!



e Bin



me to
view

TripAdvisor - Hotels Flights Restaurants

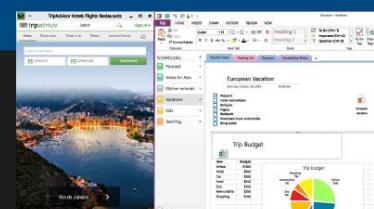
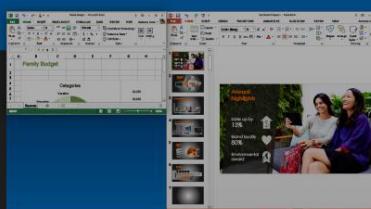
The screenshot shows the TripAdvisor homepage. At the top, there's a navigation bar with links for Hotels, Restaurants, Things to do, Flights, Destinations, and More. Below the navigation is a search bar with fields for 'Check In' and 'Check Out', and a large green 'Find Hotels' button. The main visual is a scenic aerial view of Rio de Janeiro at night, featuring the city built into hills overlooking a large bay. A callout box labeled 'Rio de Janeiro' points to the bottom right of the image. At the bottom left, there's a 'Quick Notes' section.

OneNote - Vacation

The screenshot shows a Microsoft OneNote page titled 'Vacation - OneNote'. The page has a ribbon menu with FILE, HOME, INSERT, DRAW, HISTORY, REVIEW, and VIEW tabs. The 'HOME' tab is selected. On the left, there's a 'Notebooks' sidebar with categories like Personal, Notes for Alan, Kitchen remodel, Vacations, Kids, and Teaching. The main content area shows a note titled 'European Vacation' dated Monday, October 20, 2014, at 10:08 AM. The note contains a checklist of items: Passport (checked), Hotel reservations, Rail pass, Flights, Backpack, Download music and movies, and Bring tablet. Below the checklist is a 'Trip Budget' section with a table and a pie chart. The table lists budget items and amounts:

Item	Budget
Airfare	\$1000
Hotel	\$900
Car	\$300
Food	\$650
Zoo	\$350
Memorabilia	\$200
Shopping	\$400

The pie chart shows the distribution of the budget: Airfare (26%), Shopping (11%), Memorabilia (5%), Zoo (9%), Food (11%), and Shopping (5%). To the right of the note is a thumbnail image of a bridge over water.



Windows Technical Preview
Evaluation copy. Build 9841

10) Multi Level Help

The screenshot shows the Windows Server Essentials Dashboard interface. At the top, there's a navigation bar with tabs: HOME, USERS, DEVICES, STORAGE, and APPLICATIONS. The HOME tab is currently selected, indicated by a dark grey background. Below the navigation bar, there's a sub-navigation bar with three items: Get Started, Health Monitoring, and Health Report. The 'Get Started' item is highlighted with a dark grey background. On the left side of the dashboard, there are five colored boxes: an orange 'SETUP' box, an orange 'SERVICES' box, an orange 'ADD-INS' box, a yellow 'QUICK STATUS' box, and a yellow 'HELP' box. The 'SETUP' box contains the text: 'Complete these tasks to configure your server for the first time.' The 'SERVICES' box contains: 'Integrate your server with business productivity and collaboration solutions.' The 'ADD-INS' box contains: 'Install valuable add-ins for your business.' The 'QUICK STATUS' box contains: 'View a summary of the server configuration status.' The 'HELP' box contains: 'Get online help and other information for your server.' To the right of these boxes is a list of eight help-related tasks:

- Get updates for other Microsoft products
- Add user accounts
- Add server folders
- Set up Server Backup
- Set up Anywhere Access
- Customize Health Report Settings
- Set up Client Restore Service
- Connect computers

In the top right corner of the dashboard window, there's a yellow warning icon with a exclamation mark and the number '3' inside a small box, indicating three pending notifications. Next to it are 'Settings' and 'Help' buttons. The title bar of the window reads 'Windows Server Essentials Dashboard'. The bottom right corner of the dashboard area features the Neowin logo.

The screenshot shows the Microsoft Excel ribbon with the 'Inicio' tab selected. The 'Alineación' group is active, and a tooltip 'Alinear a la derecha' (Align right) is displayed over the right-align button. The Excel interface includes the ribbon tabs (Archivo, Inicio, Insertar, Diseño de página, Fórmulas, Datos, Revisar, Vista), the '¿Qué desea hacer?' search bar, and various toolbars like 'Portapapeles' (Clipboard), 'Fuente' (Font), 'Alineación' (Orientation), 'Número' (Number), 'Estilos' (Styles), 'Celdas' (Cells), and 'Modificar' (Change).

Best Used:

When you want to give the most guided experience.

When you realize that INTUITIVE doesn't really exist (non users, low users)

Complications:

Help can become annoying, inaccessible or a bad implemented feature.

Hint:

Place help everywhere but using the principle of HIDE and ORGANIZE, for example the searchbar and the text ribbon for each function in excel.

GUI GRAPHIC DESIGN STYLES

We saw patterns in user interfaces but... what about those graphic guidelines?

GUI style guides provide some helpful information about aesthetics and how far can a technology be pushed



The corporate color system reflects a rich, dynamic, multi-dimensional Adobe. Adobe is no longer simply a one-dimensional "red" company. We will retain red as the primary corporate color, but only use it in deliberate ways as an accent that elevates it to "special" status; a nod to our history that is reinforced in every communication.

The system

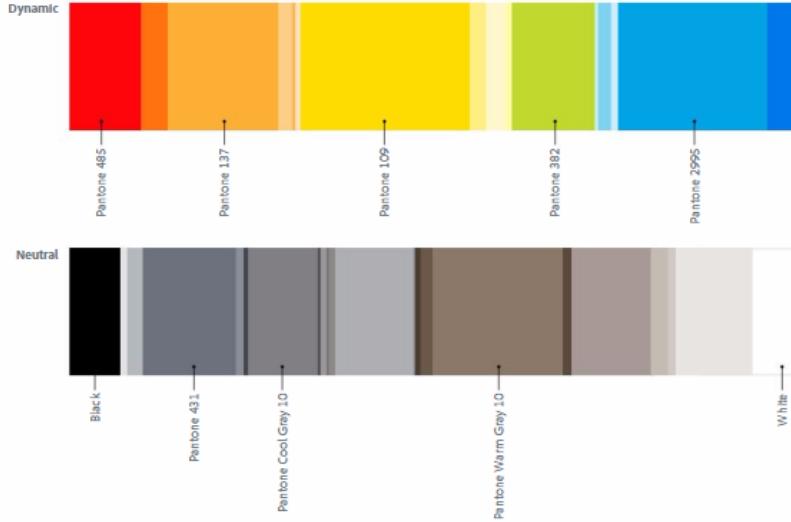
The existing Adobe red/gray/black corporate palette has been expanded to include the use of both dynamic and neutral colors that complement each other and can be used in any combination as long as the integrity of the brand is not diminished.

What does that mean?

Be creative.

When pairing colors together, use a combination of dynamic and neutral colors, not all dynamic or all neutral.

We've defined a core set of colors (shown here with Pantone values) for you to start with. The colors between those are meant to reflect the openness of the system - showing how you could filter the defined colors at various values. Don't feel limited to the colors defined here.



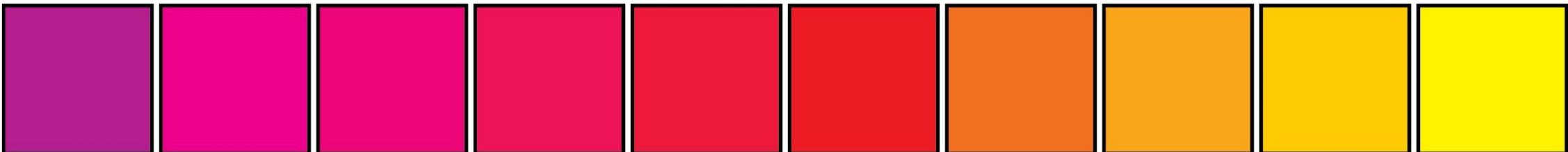
The Adobe corporate color palette is based on a core set of colors. Additional colors are available based upon particular products. If your communication is product related, follow the guidelines and relative colors found in the product guidelines.

Color	Pantone	C	M	Y	K	R	G	B	Web #
Adobe Red	Pantone 485	0	100	100	0	255	0	0	FF0000
Black	Black	0	0	0	100	0	0	0	000000
Adobe Gray	Cool Gray 7	0	0	0	50	153	153	153	999999
White	—	0	0	0	0	255	255	255	FFFFFF
Orange	Pantone 137	0	35	90	0	251	176	52	FFB034
Yellow	Pantone 109	0	10	100	0	255	221	0	FFDD00
Green	Pantone 382	29	0	100	0	193	216	47	C1D82F
Blue	Pantone 2995	90	11	0	0	0	164	228	00A4E4
Warm Gray	Warm Gray 10	0	14	28	55	138	121	103	8A7967
Charcoal Gray	Pantone 431	11	1	0	65	106	115	123	6A737B

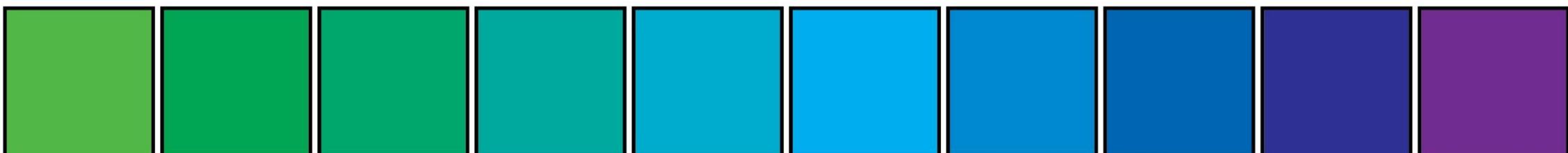
STEPS FOR MAKING AN STYLE GUIDE

1. Find your color palette
2. Decide which icons will you use
3. Define typography
4. Start Drawing!

Color Psychology



Mauve	Magenta	Crimson	Scarlet	Poster Red	Coral	Orange	Amber	Gold	Yellow
Bold	Romantic	Powerful	Bright	Popular	Wild	Tangy	Mellow	Joyful	Exciting
Stylish	Enchanting	Aggressive	Believable	Dangerous	Fiery	Tempting	Abundant	Sunny	Inspiring
Worldly	Sensitive	Dynamic	Vivid	Exciting	Passionate	Lively	Fertile	Rich	Sour
Impressive	Optimistic	Dramatic	Positive	Loud	Glorious	Zesty	Prosperous	Lavish	Anxious
Somber	Sentimental	Strong	Effective	Warning	Explosive	Tart	Contented	Uncertain	Sharp



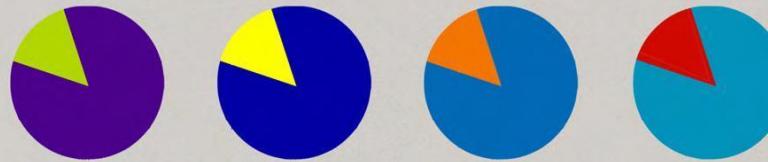
Lime	Leaf Green	Sea Green	Emerald	Teal	Cyan	Sky Blue	Ultramarine	Violet	Purple
Young	Natural	Mature	Brilliant	Primitive	Sharp	True	Fabulous	Moody	Grand
Fresh	Dependable	Strong	Beautiful	Intuitive	Clean	Honest	Compassion	Serious	Regal
Naive	Safe	Urbane	Expensive	Ancient	Cold	Good	Stately	Thoughtful	Leader
Clean	Secure	Moving	Wise	Aesthetic	Intelligent	Calm	Moving	Quiet	Superior
Lively	Healthy	Restless	Eternal	Sharp	Analytical	Peaceful	Soulful	Reflective	Majestic

Color Schemes

complementary colors

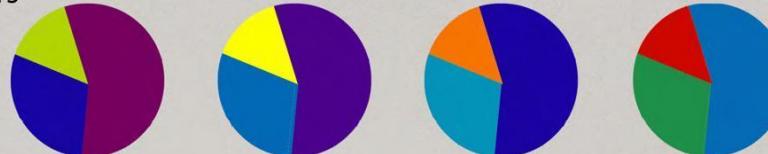
hues opposite the color wheel

complementary colors are more intense, and "vibrate" when placed next to each other as they compete for your attention



split complementary colors

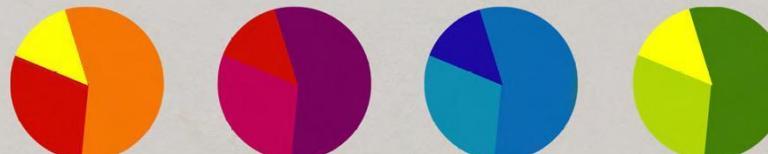
one of the complementary colors is split off into a pair of neighboring hues



analogous colors

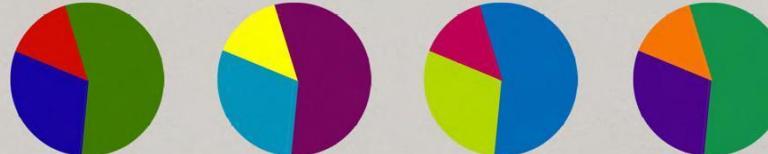
colors that neighbor one another on the color wheel

hues appear to "push" at each other, creating an optical illusion where each zone appears larger when it has your attention

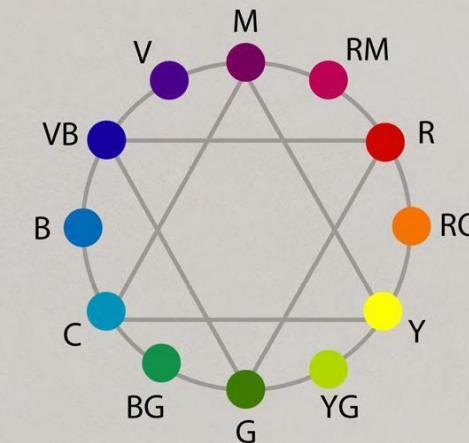


triad colors

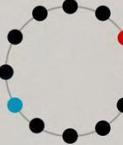
hues equidistant on the color wheel



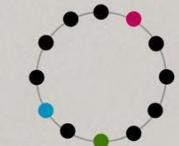
Color Wheel



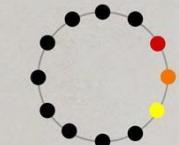
Y - yellow
YG - yellow green
G - green
BG - blue green
C - cyan
B - blue
VB - violet blue
V - violet
M - magenta
RM - red magenta



split complementary color



analogous color



triad color



TOP SANS SERIF TYPEFACES 2017

Open Sans	Ascender Fonts	TrueType	5.0
Roboto	Christian Robertson	TrueType	5.0
Montserrat	Julieta Ulanovsky	OpenType	5.0
Helvetica	Linotype	OpenType	5.0
Raleway	The League of Moveable Type	OpenType	4.9



Getting Started

Welcome

Style Guide

Logo

Spacing and Sizes

Colors

Definitions

Color Usage

Typography

Icons and Illustrations

Photography

Print

Marketing

Presentations

Website

Social Media

Ads

Product Descriptions

Colors

Definitions

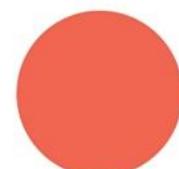
 Color Swatches

ASE, LESS, SCSS



Primary Color Palette

The Primary Palette should be used in all occasions for Frontify marketing communications designed to give a bold and exciting direction to the brand, offering flexibility in the design online. Percentage tints can be used of any of these colours.



Frontify Red

\$color-red

#F16651

241, 102, 81



Frontify Orange

\$color-orange

#FAB117

250, 177, 23



Frontify Blue

\$color-blue

#5FC8D7

95, 200, 215



Frontify Navy

\$color-navy

#02546E

2, 84, 110



Colors

Definitions

 Color Swatches

ASE, LESS, SCSS



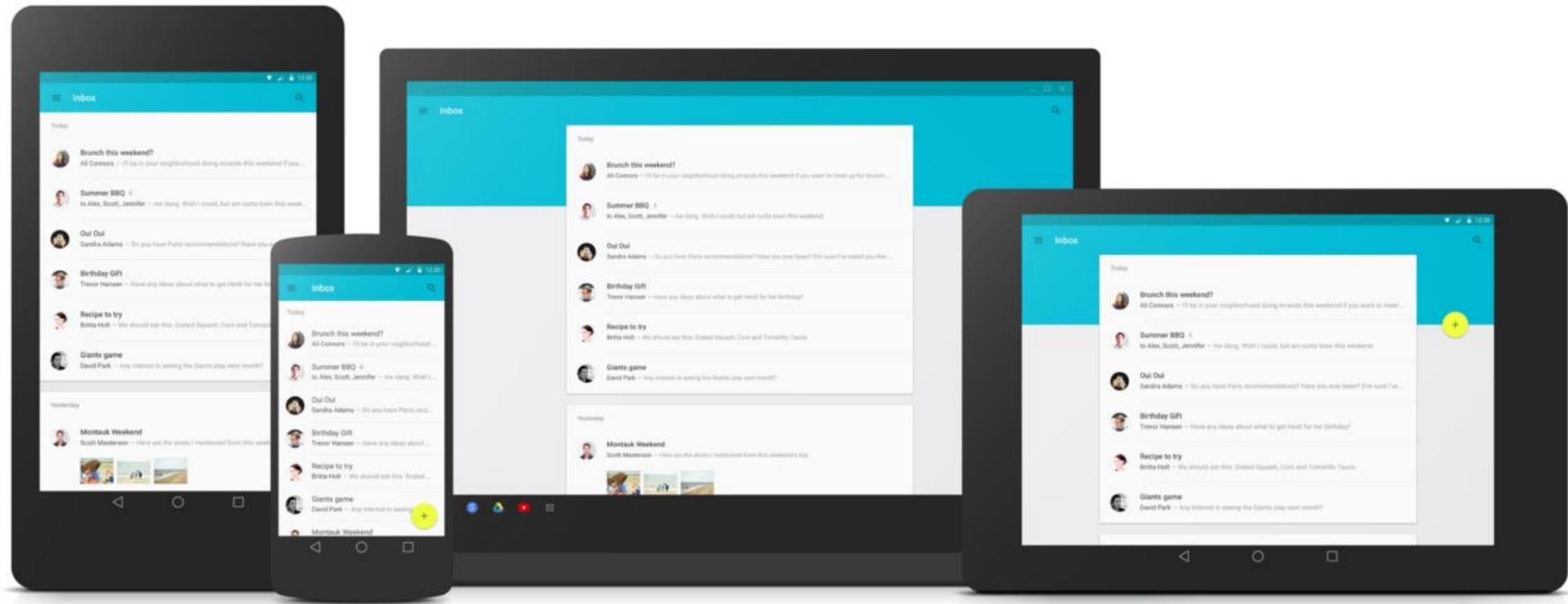


ICON SETS

You need icons for your application or website!

Icons can make a lot of difference between a mediocre designed product and a well crafted one!

You can find a lot of them here:
<https://www.flaticon.com/>
<https://www.iconfinder.com/>



MATERIAL DESIGN

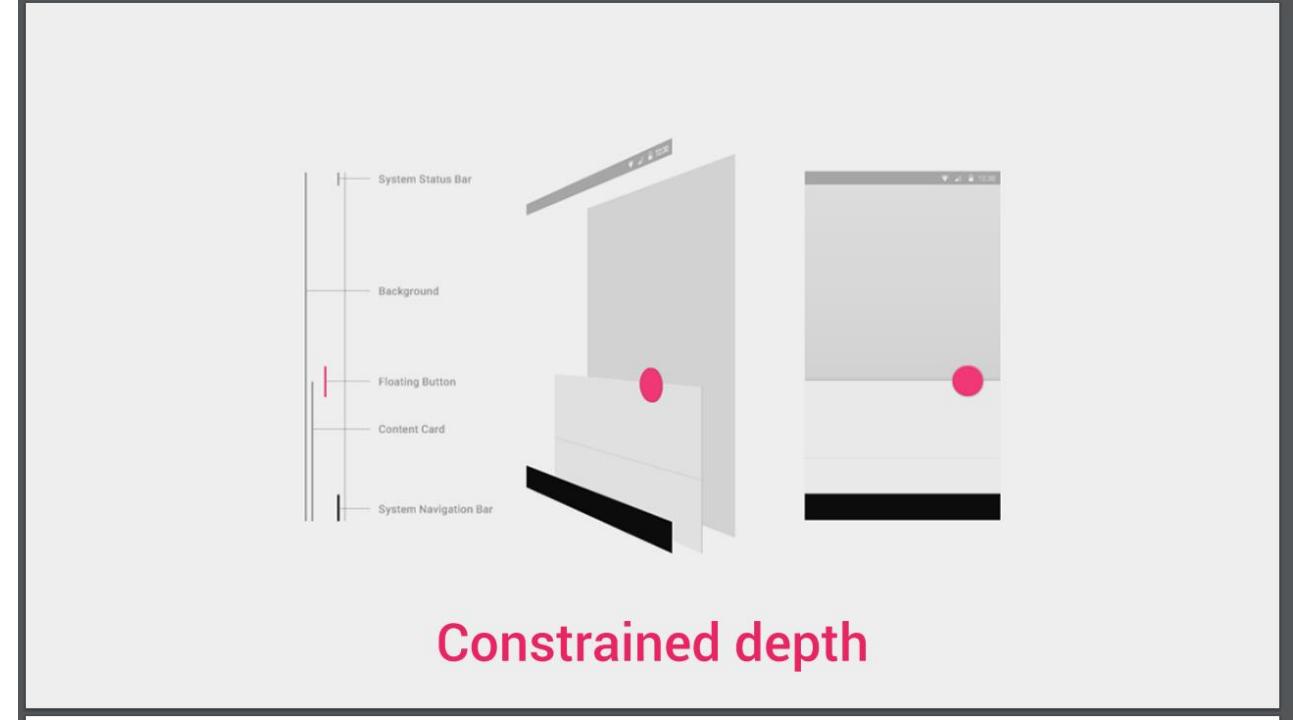
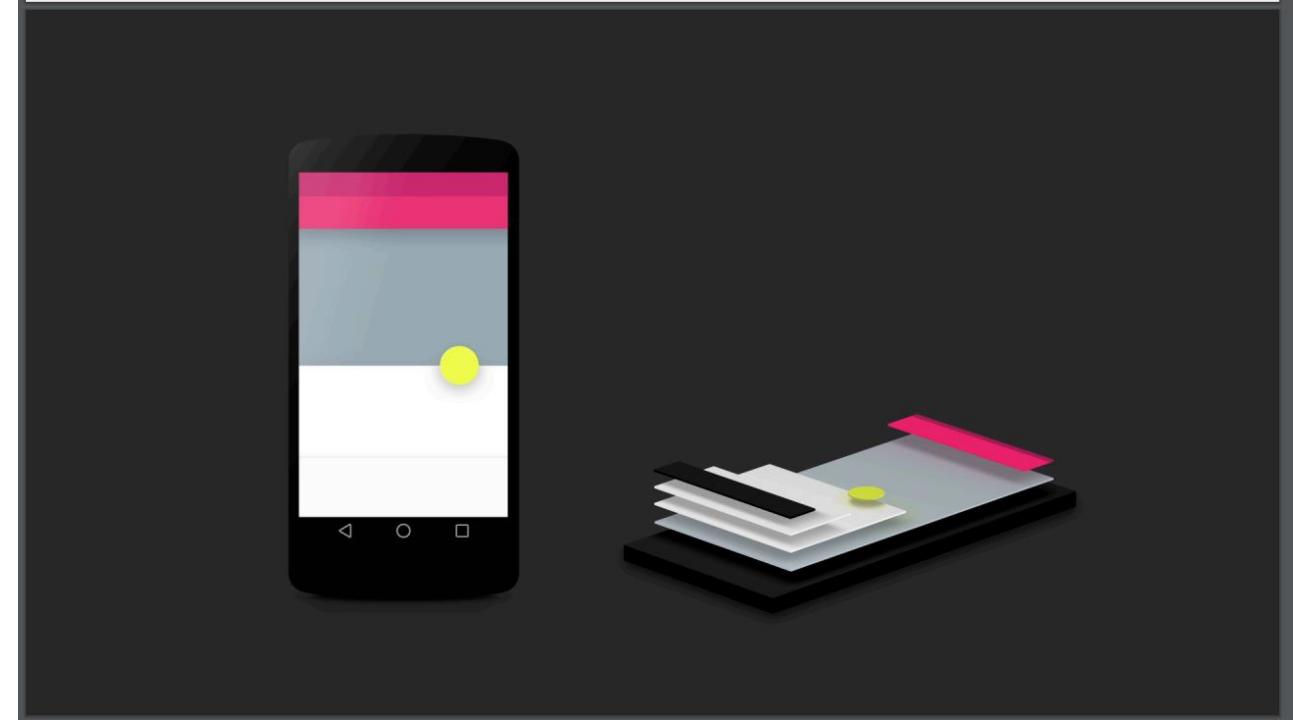
GOOGLE'S MATERIAL DESIGN

Mobile interfaces meet
layered 3D design.

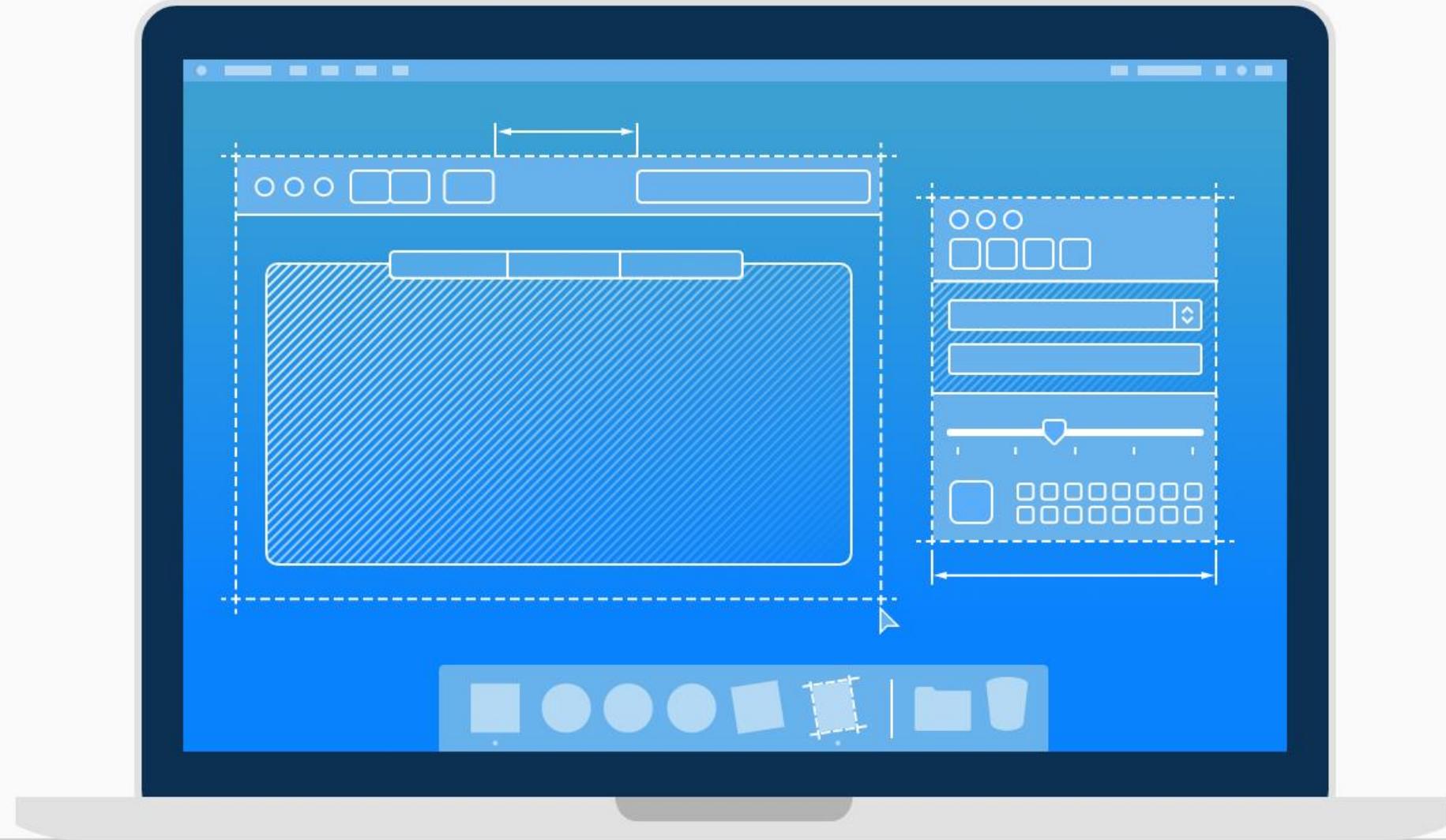
Each layout has a volume
and different depth

To see it in detail Click Here:

<https://webcourse.cs.technion.ac.il/236504/Winter2014-2015/ho/WCFiles/10.%20Material%20design.pdf>



Constrained depth



Apple's Human Interface Design Guidelines

References

- Designer's Cheat Sheet: <http://www.hongkiat.com/blog/cheatsheet-graphic-designers/>
- Tidwell, J. (2010). *Designing interfaces: Patterns for effective interaction design.* " O'Reilly Media, Inc.".
- Colborne, G. (2010). *Simple and usable web, mobile, and interaction design.* New Riders.
- Abras, C., Maloney-Krichmar, D., & Preece, J. (2004). User-centered design. Bainbridge, W. *Encyclopedia of Human-Computer Interaction.* Thousand Oaks: Sage Publications, 37(4), 445-456.
- Apple's Human Interface Guidelines: <https://developer.apple.com/ios/human-interface-guidelines/visual-design/color/>
- Google's Material Design Guideline: <https://webcourse.cs.technion.ac.il/236504/Winter2014-2015/ho/WCFiles/10.%20Material%20design.pdf>



Class has died... for today!