

Application GUI Design – Notes From a Toolkit Developer



stosb.com/talks

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What does it do?

- ▶ Essential features

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What does it do?

- ▶ Essential features
- ▶ Nice to have features
- ▶ Niche features ($<1\%$ of the users)
- ▶ Remove all the non-essential features

Who is it for?

- ▶ CLI power users? Designers?

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- ▶ Application specific classifications
- ▶ Userbase \neq you

KISS

- ▶ Adapt feature list according to your audience



KISS

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- ▶ Keep focus on the more important features



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KISS

- ▶ Adapt feature list according to your audience
- ▶ Keep focus on the more important features
- ▶ Avoid creating complex UIs
- ▶ Keep option lists (combo box) short, simple and if there's no choice, split to categories



Have a rough sketch

- ▶ Make a general storyboard sketch

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- ▶ Have all the major interactions and features there

Have a rough sketch

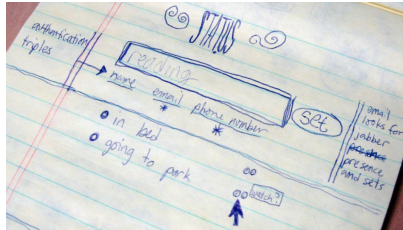
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Stick to the basics

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Stick to the basics

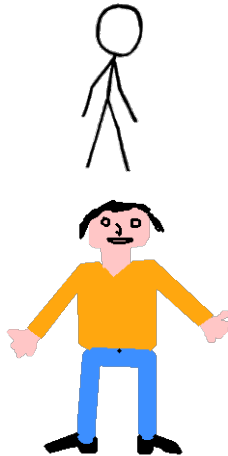
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- ▶ Do not customise available widgets/patterns unless there really is no other way

Stick to the basics

- ▶ Don't bother with colour – harder and will be added later
- ▶ Do not customise available widgets/patterns unless there really is no other way
- ▶ Develop it around the content – content is king

I meant it! KISS...

- Be purposefully simple



I meant it! KISS...

- ▶ Be purposefully simple
- ▶ Skeuomorphs are almost always bad



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- ▶ Be consistent (easier when simple)

Next

Next

I meant it! KISS...

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- ▶ Skeuomorphs are almost always bad
- ▶ Be consistent (easier when simple)
- ▶ Make it simple for your users – don't create new usage patterns, and adhere to common ones



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- ▶ Be purposefully simple
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- ▶ Make it simple for your users – don't create new usage patterns, and adhere to common ones
- ▶ Common (all?) usage patterns should be easily available



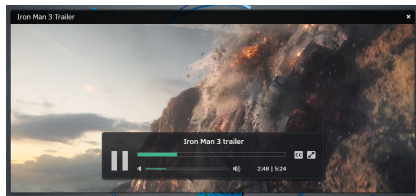
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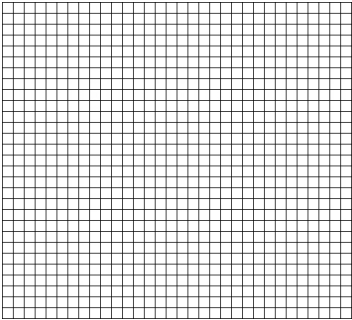
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 - ▶ Rest should be revealed as needed
- ▶ Make self-documenting applications



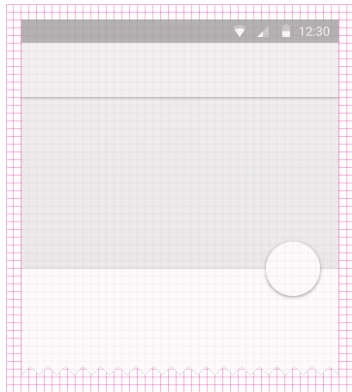
Spacing

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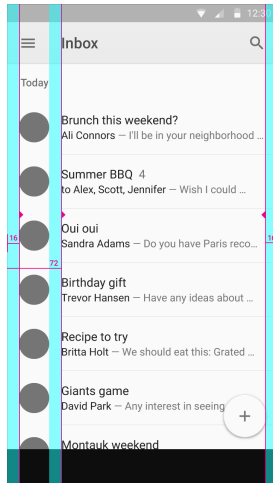
Spacing

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- ▶ Align everything to that baseline size



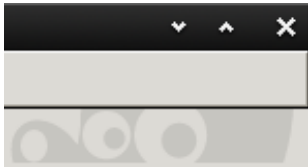
Spacing

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- ▶ Align everything to that baseline size
- ▶ Use a small set of spacing alternatives (e.g. 2, 3 and 6 units)



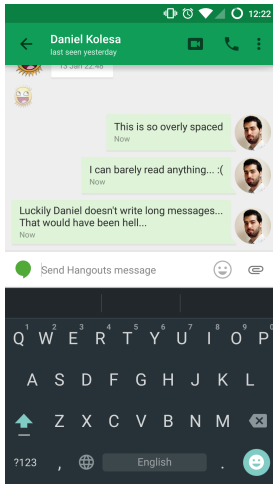
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- ▶ Make sure touch-targets are spaced enough



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- ▶ Use a small set of spacing alternatives (e.g. 2, 3 and 6 units)
- ▶ Make sure touch-targets are spaced enough
- ▶ Be generous, but don't overdo it (don't waste my screen estate)



- 



Mail
Yahoo! Mail



News
Yahoo! News



Finance
Yahoo! Finance



Sports
Yahoo! Sports



Local
Yahoo! Local

Where to when what how

Yahoo! Shopping Thousands of stores. Millions of products.

Department	Search	Features
Appliances	Amazon.com	Price Match
Automotive	Best Buy	Price Drop
Books	Books.com	Free Shipping
Computers	CompUSA	Free Shipping
Electronics	Costco	Free Shipping

Arts & Humanities

Books & Media
F&C, Amazon.com, Barnes & Noble

Business & Economy
Bloomberg, Reuters, Money Magazine

Restaurants & Sports
Sports, Sports America, Outdoors

Competition's Internet
Competition's Internet

Reference
Encyclopedia Britannica, Dictionary.com

Education
Education, Education.com, K-12

Regional
Regional, Regional.com, 123City.com

Entertainment
Entertainment, Entertainment.com, USA Today, Movie Line, TV.com

Science
American Anthropology, Smithsonian

Government
Government, White House, Congress

Social Science
Social Science, Social Science.com

Health
Health, Health.com, Health.com

World
World, World.com, World.com

Travel
Travel, Travel.com, Travel.com

Weather
Weather, Weather.com, Weather.com

Hot News

 - 2. Chicago: Big news about...
 - 3. ...
 - 4. ...
 - 5. ...
 - 6. ...
 - 7. ...
 - 8. ...
 - 9. ...
 - 10. ...

Headline Stories

 - 1. ...
 - 2. ...
 - 3. ...
 - 4. ...
 - 5. ...
 - 6. ...
 - 7. ...
 - 8. ...
 - 9. ...
 - 10. ...

Today's Headlines

 - 1. ...
 - 2. ...
 - 3. ...
 - 4. ...
 - 5. ...
 - 6. ...
 - 7. ...
 - 8. ...
 - 9. ...
 - 10. ...



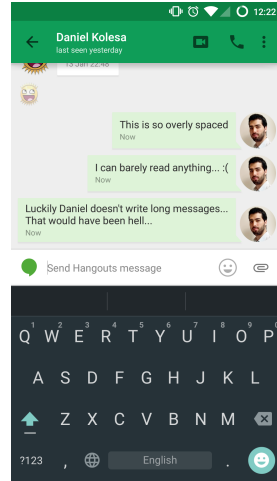
Organization

- ▶ Content should be at the front of the stage
- ▶ Important functionality in key positions



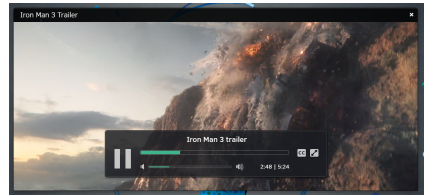
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- ▶ Make the hierarchy of information clear



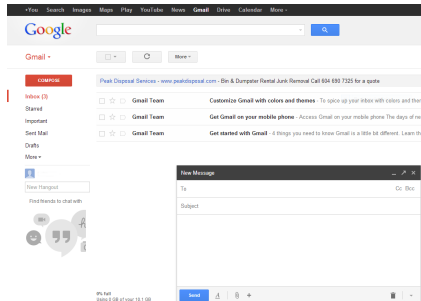
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- ▶ Important functionality in key positions
- ▶ Make the hierarchy of information clear
- ▶ Associate related elements
- ▶ Help directing the user's focus



Icons and images

- ▶ Use known icons on buttons



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- ▶ Use rich graphics when appropriate (cover-art, mood graphics, etc.)



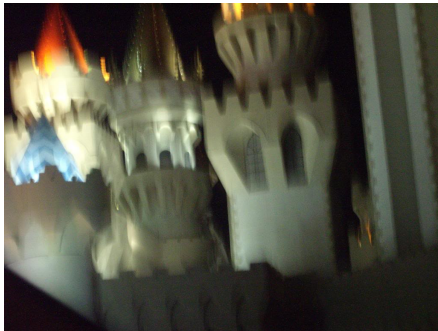
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- ▶ Don't overshadow content
- ▶ Don't use ugly graphics
- ▶ Have consistent sizing



Typography

- ▶ Use a readable font size

Text should be big and readable for everyone

Typography

- ▶ Use a readable font size
- ▶ Space up your text

Alice's Adventures in Wonderland (commonly shortened to Alice in Wonderland) is an 1865 novel written by English author Charles Lutwidge Dodgson under the pseudonym Lewis Carroll. It tells of a girl named Alice falling through a rabbit hole into a fantasy world populated by peculiar, anthropomorphic creatures. The tale plays with logic, giving the story lasting popularity with adults as well as with children.

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- ▶ Use text attributes (e.g. bold and size) to make text more or less prominent
- ▶ Use a small set of fonts (probably one)



Overlaying text on images

- ▶ Just put it on (bad)



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- ▶ Black/colour/white-wash the whole image to make text readable



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- ▶ Add a translucent gradient (i.e. partial black/white-wash) so your text area is handled



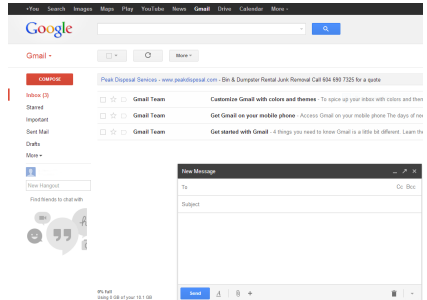
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- ▶ Use a big font with a shadow and on outline



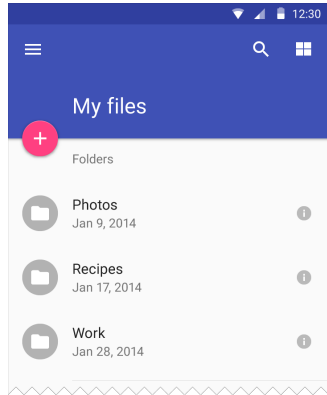
Colour

- Option 1 (easier): keep the interface b&w and use colour to direct focus



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- ▶ I almost always tint my greys (and not use black)

Some text!
Some text!

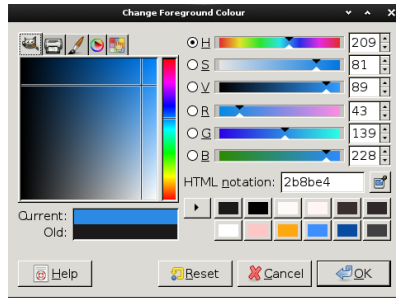
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- ▶ Find a good palette online

Primary – Indigo	
500	#3F51B5
100	#C5CAE9
500	#3F51B5
700	#303F9F
Accent – Pink	
A200	#FF4081
Fallback	
A100	#FF80AB
A400	#F50057

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- ▶ Find a good palette online
- ▶ Use HSV rather RGB when choosing colours



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- ▶ Compare to other applications you/users like better using what we've covered

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- ▶ Don't copy, learn. . .

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User experience tips

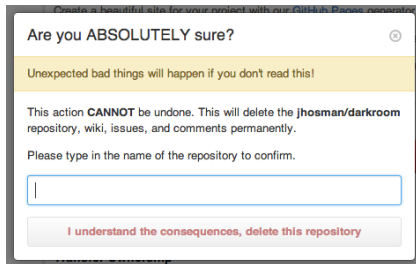
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User experience tips

- ▶ Consistent behaviour (with the platform and within the application)
- ▶ Start instantly and lazy load in the background
- ▶ Everything should take a small amount of clicks
- ▶ Discoverable UI (easy to figure out how to do things)

More user experience tips

- Make it harder to make mistakes



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- ▶ Avoid interruptions



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More user experience tips

- ▶ Make it harder to make mistakes
- ▶ Avoid interruptions
- ▶ Sort long lists in a predictable, sensible order
- ▶ If your users do something and expect something to happen, it probably should happen

Open-source GUI toolkits

- ▶ Opted for a consistent theme-able system, not individually styled apps

Open-source GUI toolkits

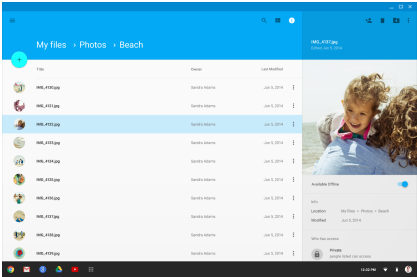
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Open-source GUI toolkits

- ▶ Opted for a consistent theme-able system, not individually styled apps
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- ▶ Mostly similar in their widget offering and can be styled to look similar

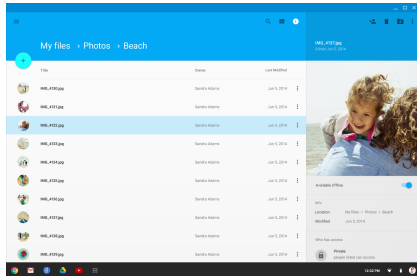
Material design (Google)

- Highly talked about cross device design guidelines



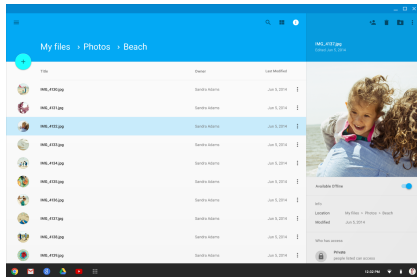
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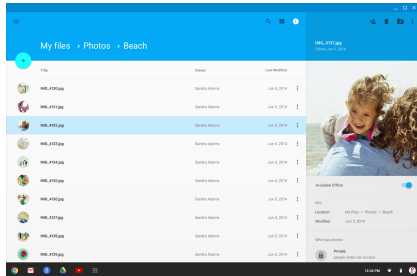
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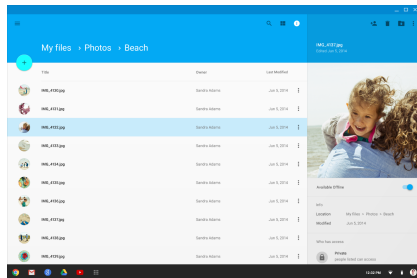
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Material design (Google)

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- ▶ Concepts are good, it's implementations that are not always good
- ▶ It doesn't feel like they care about low-end and power consumption



iOS guidelines

- ▶ Old style: horrible skeuomorphism

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iOS guidelines

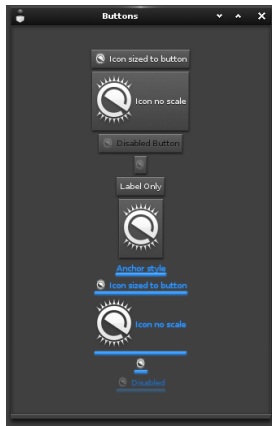
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iOS guidelines

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- ▶ Flat and easy to theme
- ▶ Good general guidelines
- ▶ Usually not very discoverable

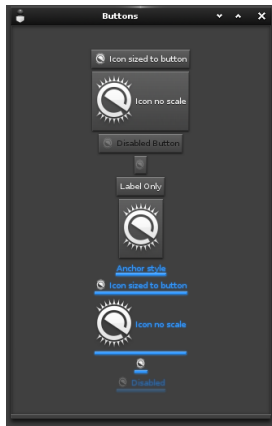
EFL

- ▶ Proportional layout (hard to create non-scalable layouts)



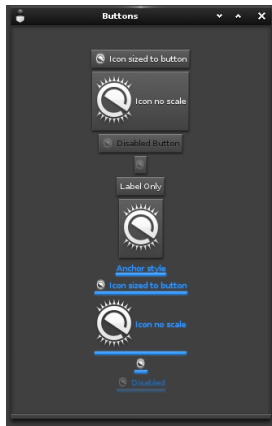
EFL

- ▶ Proportional layout (hard to create non-scalable layouts)
- ▶ We make it harder to not use the system theme



EFL

- ▶ Proportional layout (hard to create non-scalable layouts)
- ▶ We make it harder to not use the system theme
- ▶ We are mostly flat, use 3d when helps usability (similar to Material)



Know your toolkit

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- ▶ Know what takes a performance hit on your toolkit

Know your toolkit

- ▶ Trying to pixel match a design across toolkits is stupid
- ▶ Know what takes a performance hit on your toolkit
- ▶ Check out the toolkit's common patterns, those are usually best for performance and users

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- ▶ Use common patterns (and take inspiration from the best)

Easy takeaways

- ▶ It's like API design, it should be simple, self-documenting, consistent and have a familiar feeling
- ▶ Start with black and white, don't colour unless you need it
- ▶ Saturate your greys and don't use black
- ▶ Add spacing and make your text bigger
- ▶ Use common patterns (and take inspiration from the best)
- ▶ Pay the design some thought (from the start)

Less obvious example

- ▶ The hell that is going to the cinema in London...

Questions?

Tom Hacoen

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<http://stosb.com>

@TomHacoen

- ▶ Page 11, flight-deck.jpg
- ▶ Page 15, twitter-sketch.jpg
- ▶ Page 23, purposefully-simple.png
- ▶ Page ??, skeuomorph.jpg
- ▶ Page ??, self-documenting.png
- ▶ Page ??, layout-baseline-align.png
- ▶ Page ??, layout-spacing-alternatives.png
- ▶ Page 55, direct-attention.png

- ▶ Page ??, imagery-mood.png
- ▶ Page ??, bad-blurry.png
- ▶ Page ??, multiple-fonts.png
- ▶ Page 50, text-overlay-bad.jpg
- ▶ Page ??, two-colours.png
- ▶ Page ??, palette.png
- ▶ Page 69, repo-delete-confirmation.png
- ▶ Page ??, interrupt-programmer.jpg
- ▶ Page 76, material.png