

# LIS-3353

## User Interfaces

# LIS-3353

aka, what's the difference between  
using a computer and  
programming a computer?

Everyone needs to learn to code!!

?

*An opinionated and rough measure of “programming-ness”*

Changing your screensaver

Writer/Word

Calc/Excel

Macros

HTML/PHP/MYSQL

Bash

Python/Perl/Ruby/Java/Javascript/C# *interpreted/scripted*

*C compiled*

Assembly (00 4E A3 77 8C 0A etc)

Machine (00101010011010101100)

# The Good and Bad (and Bad) of "post Microsoft" GUIs



The good – we covered this, right?

The (first) bad, by way of an aside...

## Flat Design v. Skeuomorphism Which is better?

### Flat Design



A flat design calendar for August 2014. It features a dark blue header with navigation arrows and the month/year. The days of the week are abbreviated in a dark blue bar. The dates are displayed in a clean, sans-serif font on a white background. The date 12 is highlighted with a light blue background.

August 2014						
SU	MO	TU	WE	TH	FR	SA
	26	27	28	29	30	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5
6						

### Skeuomorphism Design



A skeuomorphic design calendar for September 2013, styled to look like a physical calendar with a red header and metal rings. The days of the week are in a teal header. The dates are in a sans-serif font on a white background. The date 5 is highlighted with a teal background, and the date 21 is highlighted with a red background. There are small red dots on the dates 18 and 21.

September 2013						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
24	25	26	27	28	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	1	2	3	4	5	6

# Flat Design v. Skeuomorphism

## Which is better?

There are lots of professionals out there with very serious and thought out answers to this questions; and one can get quite far by being engaged with it...

# Flat Design v. Skeuomorphism

## Which is better?

There are lots of professionals out there with very serious and thought out answers to this questions; and one can get quite far by being engaged with it...

..and I'm not one of them.  
My somewhat-serious answer is

**WHO TF CARES.**



# Flat Design v. Skeuomorphism

## Which is better?

I do have a serious answer though:



Specifically: Who/what is preventing you from having a choice?

No, seriously, people. This is stupid.



No, seriously, people. This is stupid.

It is probably true that, for example, too much bright light in your face at night messes with your sleep

- it's definitely true that it's annoying
- it's definitely true that dark backgrounds with light text is **trivially** easy to implement. 30 year old operating systems had multiple ways of doing this.

and yet. Where are we with night modes?

# They giveth and they taketh away

The false presumption:

Good / Easy GUIs **MUST** result in fewer options for the user.

# Which is “primitive?”

```
Last login: Fri Aug 17 16:33:00 on ttys000
Valkyrie:~ whitsongordon$ sh top10.sh
Example Commands:
10. top
9. ifconfig /all
8. chmod +x newtop10.sh
7. ssh -l whitsongordon@192.168.0.12
6. wget http://lifehacker.com
5. vim todo.txt
4. grep top 10
3. ...
2.
1.

Valkyrie:~ whitsongordon$
```



# Why command line/text?

Because you can very quickly say/relate complex concepts in a concise way, by combining a series of simple symbols.

You know, like talking. Or writing.

Command line is the act of literally talking to the computer....unlike...

This is cool



This is cool



Utterly inefficient and kind of stupid for the task, I mean, Google Maps is literally already MUCH better than this today, but cool.



# What's so bad about the mouse and touchscreens, etc?

“Caveman interface.”

- Pre-linguistic/animal-like
- “Point and grunt”

(Tablets and even “Minority Report” etc, are cool and fun...but why is Charades a game?)

# Intelligence requires Language

Buttons and gestures are frequently convenient for repetitive tasks...

...but to do anything intelligent, you need LANGUAGE.

TEXT. Numbers and Letters.

# So again...

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```

literal infinity  
bounded only by the limits  
of all language and math



the 12 or so things the little  
buttons it allows you to do

It's so easy, even...



## Either way...

Yes – early text was (and is?) ugly and unforgiving, and fixing that to various degrees propelled the big tech companies..

... but, along the way, restricting access to “back-end” text stuff helped create some of the messes we deal with today; including the oddness of programming languages.

## So, “text”

- sane
- predictable
- simple
- infinitely useful and portable

...and formerly not sexy at all  
it's coming back, though...

## Obvious old school text drawbacks

Though powerful; very “brittle” – this applies to most programming languages as well:

”You can understand this sentence tacos even though I put a random word in.”

(this will break many a text interface, badly)

# Voice Interfaces (alexa, siri et al)

Interesting; and MUCH closer to the command line:

You tell it things, and it tries to do them.  
Some notable differences though



## So, (old school) “text”

- sane
- predictable
- simple
- infinitely useful and portable
- but not “easy.” (requires precision, sometimes not useful feedback, not a lot of intuition)

# Voice Commands

- sane-ish?
- (somewhat) predictable
- NOT simple
- NOT infinitely useful or portable by any means. A VERY VERY limited set of commands.

(Can't even play "old town road," whats up with that?)