



API Mixtape

SKETCH NOTES

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API MIXTAPE WELCOME MESSAGE



GREGORY KOBERGER,
README



APIs GIVE
NORMAL PEOPLE
SUPERPOWERS

APIs ARE LIKE
LEGOS



YOUR API HAS
ONE GOAL: TO BE
USED



HOW DO YOU
BUILD FOR
THAT?



DESIGN

What to think about before you write
your first line of code

YOUR API IS BAD & YOU SHOULD FEEL BAD



REST is GAINING ADOPTION
(HTTP BASED)



SOUNDS GOOD, LET'S BUILD!

NO
YOU NEED A BUNCH MORE PLANNING!

THE BEST DESIGN IS THE *simplest* THAT WORKS



SHARE YOUR DESIGN



KNOW THY AUDIENCE

THIS IS WHAT WE NEED!

THIS IS WHAT WE CAN SELL



I MADE THE THING, JOB DONE!

NO
PLAN TO MAINTAIN YOUR API, SDK & DOCUMENTATION

OPEN SOURCE IT!
WHO KNOWS, SOMEONE MIGHT MAKE IT BETTER!



NO DOCUMENTATION IS THE WORST THING YOU CAN DO!
(WHAT IF YOU GET HIT BY A BUS?)



AMANDA FOLSON

@AmbassadorAwsum

THE BEST API IS THE ONE THAT **EXISTS!**

IN SEARCH OF THE 'GOLDILOCKS' API



CALVIN FRENCH-OWEN,
SEGMENT

@calvinfo



WHICH SHOULD I PICK?
THERE ARE SO MANY!



THE QUEST FOR "JUST RIGHT"

IT'S SO EASY TO GET LOST
IN THE

SEA
OF OPTIONS!



APIs

ARE LESS GATEWAYS, MORE



YOU FOLLOW CERTAIN RULES
THE SERVICE WILL FULFILL REQUESTS

RULES

for your API

WHEN IT COMES
DOWN TO IT, MOST
OF WHAT SOFTWARE
ENGINEERS DO DAY-TO-DAY
IS BUILDING 'APIs'

I KNOW YOUR
AUDIENCE

COMPLEXITY CORE FUNCTIONALITY



III KNOW YOUR
TRADE-OFFS



II SET LIMITS EVERYWHERE



IV SOLVING TODAY'S PROBLEM
VS FUTURE-PROOFING



GOOD APIS MAKE FOR GOOD UIs



APIs = Application Programming Interface



AN INTERFACE IS AN INTERFACE



DURETTI HIRPA, SLACK
@duretti

I WAS A CONSUMER OF APIS, SO I DEVELOPED STRONG OPINIONS ABOUT THEM!

NOW @ SLACK I ALSO DEVELOP MY OWN!



THIS SHOULD BE LIKE THIS!



HTTP verbs GET/SNACKS/PIZZA

REST & JSON



SO MUCH NEATER!

COMMUNICATES clearly

NEATNESS COUNTS



INTUITIVE



empathetic



DEVELOPER EXPERIENCE

UX::UI THINGS BEHAVE HOW YOU EXPECT THEM TO
DX::API

FAMILIARITY WINS OVER INTUITION

SOAP



NEEDLESSLY complex!

90's

A BRIEF HISTORY OF APIS

2000's



BUILD

Everything is designed, so it's
time to get technical!

GRAPHQL AT FACEBOOK

??????

GRAPHQL

A QUERY LANGUAGE FOR YOUR APPLICATION LAYER

```
{ me { name } }
```

HOW DO I IMPLEMENT AUTH?
HOW DO I MAKE MY API EFFICIENT?
HOW DO I CACHE MY RESULTS?



SINGLE SOURCE OF TRUTH
MAKES AUTHORIZATION SIMPLER!



THESE AREN'T ACTUALLY QUESTIONS ABOUT GRAPHQL!



CACHE
GLOBALLY UNIQUE CACHE KEY
REFETCH IDENTIFIER

HEY I NEED THAT AGAIN THX



DAN SCHAFER
FACEBOOK & CO-CREATOR
OF GRAPHQL

@dlschafer

EXPOSING PUBLIC API ENPOINTS ACROSS MICROSERVICES



THE IDEA OF MACHINES CALLING MACHINES TO DRIVE CARS IS A POWERFUL CONCEPT!

BEFORE ▶ LYFT WAS BUILT AS A SINGLE, MONOLITHIC SERVICE



THIS WAS GREAT WHEN WE WERE SMALLER!



AS WE GOT BIGGER WE BEGAN MIGRATING TO A MICROSERVICE STRUCTURE

WE CONDUCT *Internal Advocacy* TO WHY ENPOINTS SHOULD BE EXPOSED



ROUTING RATE LIMITING AUTH

certain services are shared globally

JOSH CINCINNATI,
LYFT
@acityinohio



ESSENTIALLY, WE HAVE DECONSTRUCTED OUR ONE SERVICE INTO MANY SMALLER ONES

MICROSERVICE OWNERS WILL DEFINE WHAT THE API DEVELOPS INTO!



HUMAN-POWERED APIs AT SCALE

DEVELOPERS HAVE NEVER HAD ACCESS TO RELIABLE HUMAN INTELLIGENCE



HOW IT WORKS

CREATE A TASK

HUMAN COMPLETES TASK



YOUR TASK IS COMPLETE

BACKGROUND QA

EASE OF USE

QUALITY

RELIABILITY

ALEXANDR WANG,
SCALE

 @alexandr_wang

WE HANDLE THE
complexity
SO YOU DON'T
HAVE TO!



IMAGE
RECOGNITION



TRANSCRIPTION



CATEGORIZATION



COMPARISON



OCR
TRANSCRIPTION



DATA
COLLECTION

MARKET

Build it and they will... probably not come.
You need to get the word out!

SO YOU WANT TO BE AN ECOSYSTEM?

YOUR PLATFORM VALUE PROPS

- 1 COOL/USEFUL TECH
- 2 USER ACQUISITION
- 3 REVENUE



1 TELL YOUR STORY

IDENTIFY YOUR AUDIENCE
DETERMINE YOUR VALUE
WRITE THE NARRATIVE



SAY IT
again

YOU GET
3
STORIES
PER YEAR

2 ACQUIRE DEVELOPERS

UTILIZE
MARKETING

ALWAYS REMEMBER
TO BE GENUINE

BE
HUMAN

4
TELL
YOUR
STORY
AGAIN!
(THIS TIME
WITH PROOF.)

THIS APP
IS
GREAT



3

EQUIP YOUR
DEVELOPERS

DRIVE ADVOCACY!!

CECILIA STALLSMITH,
SLACK

@Cecistalls



We're launching a new product called **ReadMe Build!**

Great documentation is only possible if there's a close integration with the API. We're creating Build to make it easy to build world-class APIs in minutes, and make it dead simple for the end user.

<https://readme.build>

Introducing...

readme BUILD

AN EASY WAY TO
BUILD & CONSUME
AWESOME APIS

CREATE AN API IN 3 MINUTES!

\$ npm install api-g

1) INSTALL THE
API TOOL

\$ api init

2) CREATE A NEW API



3) EDIT THE API FILE

\$ api deploy

4) DEPLOY THE API

➔ DONE ➔

CONSUME AN API

USE YOUR OWN MICROSERVICES, OR
CONSUME PUBLIC APIS FROM THE REGISTRY



```
const api = require('api')('prod_gkob_8Jalja181nLJadJpqqz');  
api('math').do('multiply', {  
  x: 1, y: 5  
}, function(err, results, meta) {  
  console.log(results); });
```

NO URLS, API METHODS, HEADERS, TOKENS, MIME TYPES,
IT JUST WORKS!!

FEATURES

- ★ VERSIONING
- ★ LOGS
- ★ RATE LIMITING
- ★ DISCOVERY
- ★ PAYMENTS
- ★ AUTHENTICATION
- ★ INTERACTIVE DOCUMENTATION



THE WAY APIS
SHOULD
BE BUILT!