Making Money from FP

Joe Armstrong

Why do we want to make money from FP?

Somebody has to many money from FP otherwise there will be no jobs in FP and it will become a "hobby only" thing

Get Rich

# The Commerical Advantages of FP

Elevator pitches

- You can write programs quicker ==First to market==
- There will be less errors ==Reduced costs for maintainance ...==
- Programs are shorter ==Reduced costs for maintainance ...==

Plan

- Tell some success stories
- Starting a company
- The different types of company
- Innovating within a larger company
- Consulting
- Research

Success Stories

There is money to be made

Source: http://techland.time.com/2014/02/19/facebook-buying-whatsapp
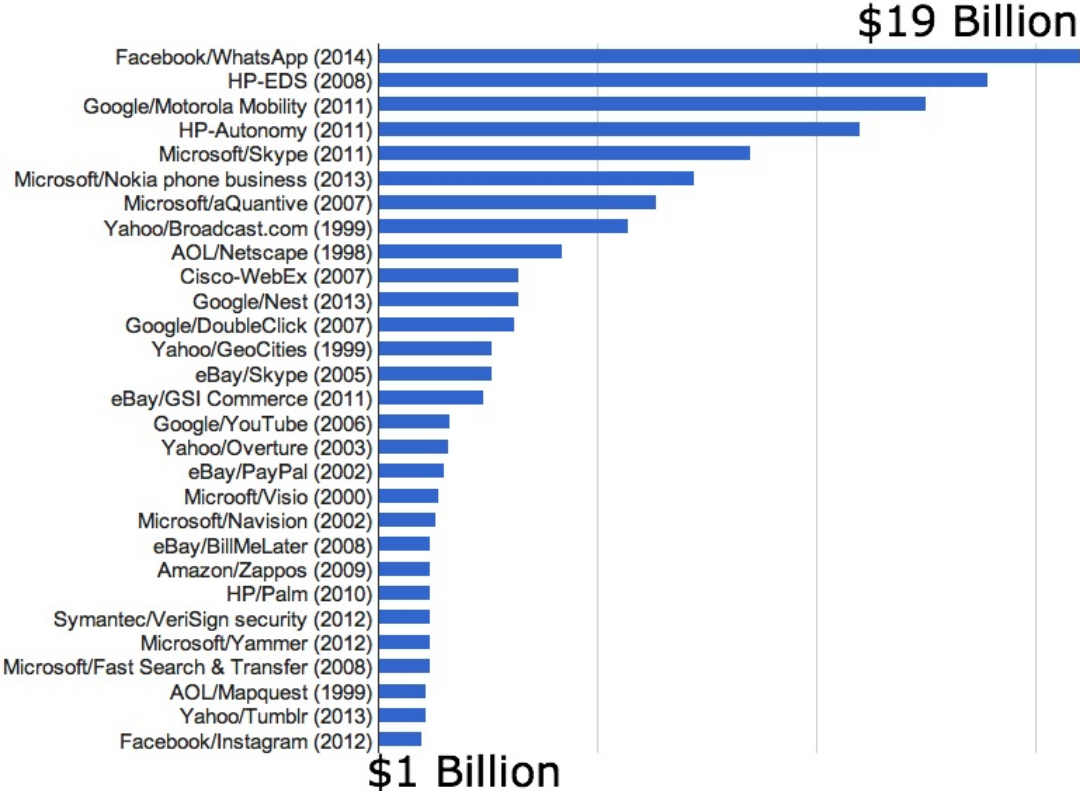
Why was WhatsApp worth $19B?

This is what TIME thought:

- Facebook wants the photos
- Facebook is becoming a social media conglomerate
- Facebook lives in fear of being disrupted in mobile
- Facebook needs to expand its Europe and emerging markets presence.
- Facebook must buy its way into "ephemeral" and/or "dark social" communications

Source:`http://time.com/8806/facebooks-whatsapp-acquisition-explained/`

But there was a another reason ...

Sequoia: These Four Numbers Explain Why Facebook Acquired WhatsApp

ALYSON SHONTELL ✉ ⟋ ✇

FEB. 19, 2014, 5:40 PM 🔥 16,301 💬 3

Sequoia Capital, the sole investor in $16 billion WhatsApp, just published a blog post about why Facebook acquired its portfolio company.

Here it is:

Earlier today, Facebook announced its acquisition of WhatsApp for $16 billion. It's a spectacular milestone for the

The second number was 32

Even by the standards of the world's best technology companies, WhatsApp runs lean. With only 32 engineers, one WhatsApp developer supports 14 million active users, a ratio unheard of in the industry. (WhatsApps support team is even smaller.) This L E G E N D A R Y crew has built a reliable, low-latency service that processes 50 billion messages every day across seven platforms using Erlang, an unusual but particularly well-suited choice. All that, while maintaining greater than 99.9% uptime, so users can rely on WhatsApp the way they depend on a dial-tone.

Source: `http://www.businessinsider.com/sequoia-why-facebook-bought-whatsapp-2014-2`

The secret

- FP - is a secret weapon delivering fast time to market
- Many companies are known to be using FP in "stealth mode"
- Companies where FP delivers a significant commercial advantage are often publicity-shy. They tell people they use Java
- Once it works they will rewrite it in dreadfultran3. There are a lot of cheap dreadfultran3 programmers out there

The road to WhatsApp

The XMPP story

- 1998 - Michaël Rémond discovers Erlang
- 2002 - Alexey Shchepin starts XMPP server
- 2006 - Alexey Shchepin Erlang User of the year
- 2007 - Adam D'Angelo makes a chat prototype at Facebook hackathon
- 2008 - Facebook chat launched (10M users)
- 2009 - Jan Koum starts playing with ejabberd
- 2010? - Facebook rewrites server in C++ (???)

sources: `https://blog.process-one.net/whatsapp-facebook-erlang-and-realtime-messaging-it-all-started-with-ejabberd/` `http://www.quora.com/Why-was-Erlang-chosen-for-use-in-Facebook-chat`

[ejabberd] client access control

Jan Koum jan.koum at gmail.com
Mon Jun 8 10:35:49 MSD 2009

- Previous message: [ejabberd] IQ Handler in external component
- Next message: [ejabberd] Degradation over time.
- **Messages sorted by:** [date] [thread] [subject] [author]

```
hi there,

i installed ejabberd today, got it work with adium/ichat and wanted to ask
you all a couple of things:

1. i am working on adding jabber support into my iphone app and i want to
configure the server in such a way that only my app can register new users
and login into the server.  is there anything i can do on the server end to
configure this?  ssl client authentication or something other client
authentication i can build into the xmpp client?

2. since this is an iphone app, the network can drop at any moment.  is
there a way for a server to quickly discover that client has disconnected so
it can begin to store messages for offline delivery?

thanks.

-- yan
-------------- next part --------------
An HTML attachment was scrubbed...
URL: <http://lists.jabber.ru/pipermail/ejabberd/attachments/20090607/6e0177f7/atta
```

- Previous message: [ejabberd] IQ Handler in external component

NyTeknik

De tre grundarna Victor Jacobsson, Sebastian Siemiatkowski och Niklas Adalberth
tillsammans med nye ordföranden Sven Hagströmer. Foto: SUVAD MRKONJIC

Googles investerare går in i svenska Klarna

Av: Marie Alpman
Publicerad 5 maj 2010 14:03

**Han har investerat i Google, Yahoo, Paypal, Apple och Cisco.
Nu tar riskkapitalisten Michael Moritz plats i det svenska e-
handelsbolaget Klarnas styrelse. Han föll bland annat för
Klarnas hemliga vapen: programspråket Erlang.**

ANNONS

Michael Moritz var en av de första att investera i
Google och han satt tidigare i Googles styrelse.

Han arbetar för det Silicon Valley-baserade
riskkapitalbolaget Sequoia Capital, som nu även
går in med 70 miljoner kronor i Klarna, som för
fem år sedan hette Kreditor och var ett litet
uppstartsbolag i Handelshögskolans
"förinkubator" SSE Business Lab.

- Det är verkligen jättekul. Det är första gången
som Michael Moritz sätter sig i en styrelse i ett
europeiskt bolag. Nu hoppas vi att han sak hjälpa
oss att bli en riktig utmanare i betalningsvärden,

Michael Moritz,
legendarisk investerar i
unga lovande it-företag.
Foto: Sequoia Capital

Working inside a larger company

Sell X inside a bigger company

X = Erlang, Haskell *the usual suspects ...*

Of course <mark>you can't sell X you must sell a product *written in X*</mark>

- They must *need* the product *really quickly*
- Your advantage is *time to market* (nothing else)
- They can do this in other languages (TM)
- Expect problems

Common Problems

- Nobody got sacked for using Microsoft/Java/C++
- Smart guys with new smart ideas represent a threat to the established order
- Nobody loves innovators
- Wars with other groups doing the "same" thing

Solutions

- Get a protector (umbrella)
- Make yourself into a group, <mark>the group is the smallest unit of survival inside a big company</mark>
- Look for project failures
- Don't challenge on-going projects just because *you can do it better* If they can do it, they *will* do it
- Don't fight bad bosses - move immediately
- If your project is cancelled rename it

Start a company

Make your mind up

- Are you a product company - <mark>you make a product that you sell</mark>
- Are you a consultancy - <mark>you sell consulting hours and courses</mark>
- Are you a development/R&D company - you develop a product and <mark>sell the company or product to a bigger company that cannot develop the product itself</mark>

All these have different risk profiles

The Method

- Choose a (new) upcoming standard (or invent something new)
- Make the worlds *best* and *first* implementation of the standard
- Gain a reputation as *the experts* -- participate in standardization
- Sell or give away the software -- *The goal is to build a reputation*
- Sell the company

Examples

- WhatsApp (19$B)
- Bluetail (154$M)
- Tail-F (175$M)
- Rabbit MQ (?? $M)

Where does the money come from?

- Business angels
- Round (K) venture capitalists
- Personal loans (bad idea)
- Loan your house - sell your cat - sell you soul to the devil (vary bad idea) No external money = no external help

Important

- Get external investors
- Don't sell all your stock
- Get the *business side* fixed
- Involve *excellent* legal etc. people. Pay them with stock.

Important note

- You are NOT selling Haskell/Erlang/TypeTrap23
- You are selling a THING written in Haskell/Erlang ...
- <mark>Your advantage is *time to market*</mark>
- You **must** have a business plan
- Concentrate on areas where big companies would *love* to be active and where there is intense competition to be first and where the profit margins are high

What is a business plan?

- What are we selling?
- How much does it cost?
- How are we going to sell it to?
- How can we reach/convince/sell to our customers?
- How can I (I = the investor) many money from this?
- How can my exit strategy (my = the investor) (exit strategy = *take the money and run*)

And ...

- Know your numbers - burn rates, profit margins ...
- Prepare the K-minute elevator pitch K = 1,2,5
- Get an amazingly good salesperson - pay them a medium amount with a huge bonus for sales
- Collect letters-of-interest, patents, newspaper articles, twitter followers, etc. Hire permanent staff. Get premises. Get customers. All the numbers from these will end up in VC's spreadsheets which effect the value of your company

The consultancy business

Why consultancies

- Lack of experienced programmers is seriously effecting the spread of FP
- Interest in FP is growing rapidly
- Income = #consultants x #profit per consultant + course fees
- Can be a private consultant (high income, no pension, get customers yourself)
- Freelance (work for an agency)
- Employee of specialist company (Erlang Solutions, Typesafe)
- Remote working is OK - but requires a good reputation (be an active blogger/author/speaker)

What you can all be doing now ...

- Write books for the average programmer No greek letters (if they can understand node.js code with callbacks inside the callbacks that are triggered when the callback is called - then monads will be a easy)
- Change the image of FP - go from scary to hip
- Blog
- Tweet
- Network

Research

Have Fun

Your turn