



# Irresponsible Architectures and Unusual Architects

QCon London 2010

# It's 1979



[http://commons.wikimedia.org/wiki/File:Space\\_Invader\\_Cabinet.jpg](http://commons.wikimedia.org/wiki/File:Space_Invader_Cabinet.jpg)

# It's 1979

Universities and big businesses have a computer  
– and international criminal masterminds

Architects wear lab coats or tee-shirts  
– and have big beards and sandals

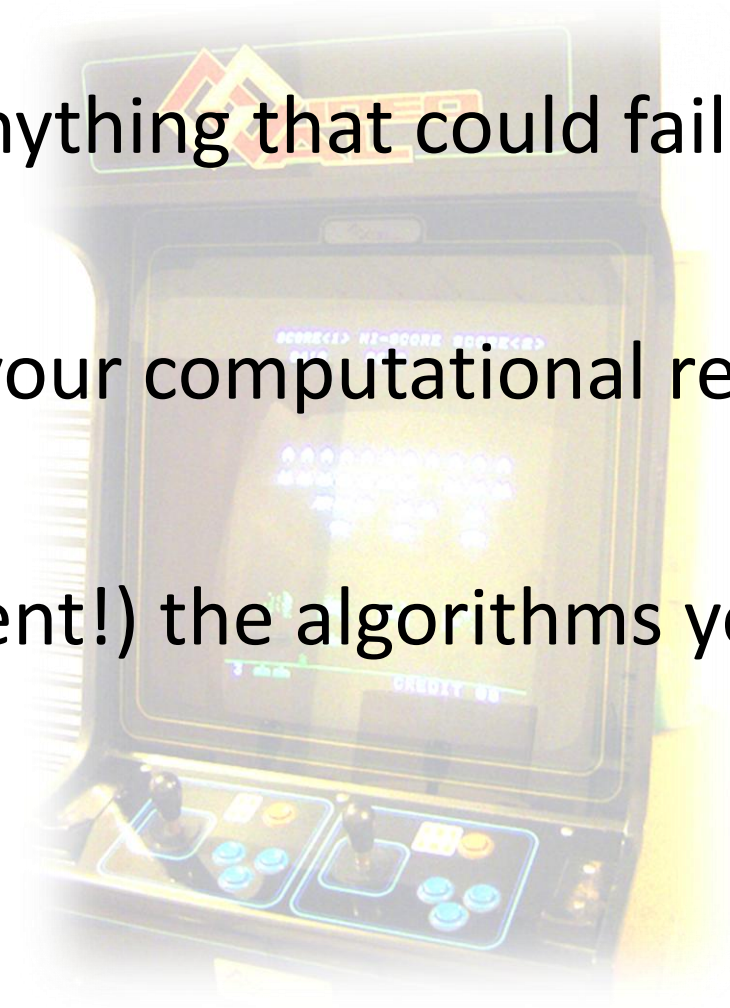
They care deeply about algorithms and big-O  
– Computer Science is a *science*!

# What is responsible architecture?

Design out anything that could fail

Understand your computational requirements

Develop (invent!) the algorithms you need





# It's 1989



[http://commons.wikimedia.org/wiki/File:ZX\\_Spectrum.jpg](http://commons.wikimedia.org/wiki/File:ZX_Spectrum.jpg)

# It's 1989

Universities all have big computers

- IBM has a PS/2 on a few corporate desks

Architects have smart suits and short hair

They care deeply about modularisation

- Some of them have noticed user experience

# What is responsible architecture?

Model your data

Data consistency, referential integrity

The UI is simply a form on a screen



# It's 1999



<http://flickr.com/photos/8399025@N07/2189564453/>



# It's 1999

Universities have all the supercomputers

- Everyone has a PC at home
- and most people have dial-up

Architects wear jeans and tee-shirts

- and have goatee beards and stock options

They care about distributed computing

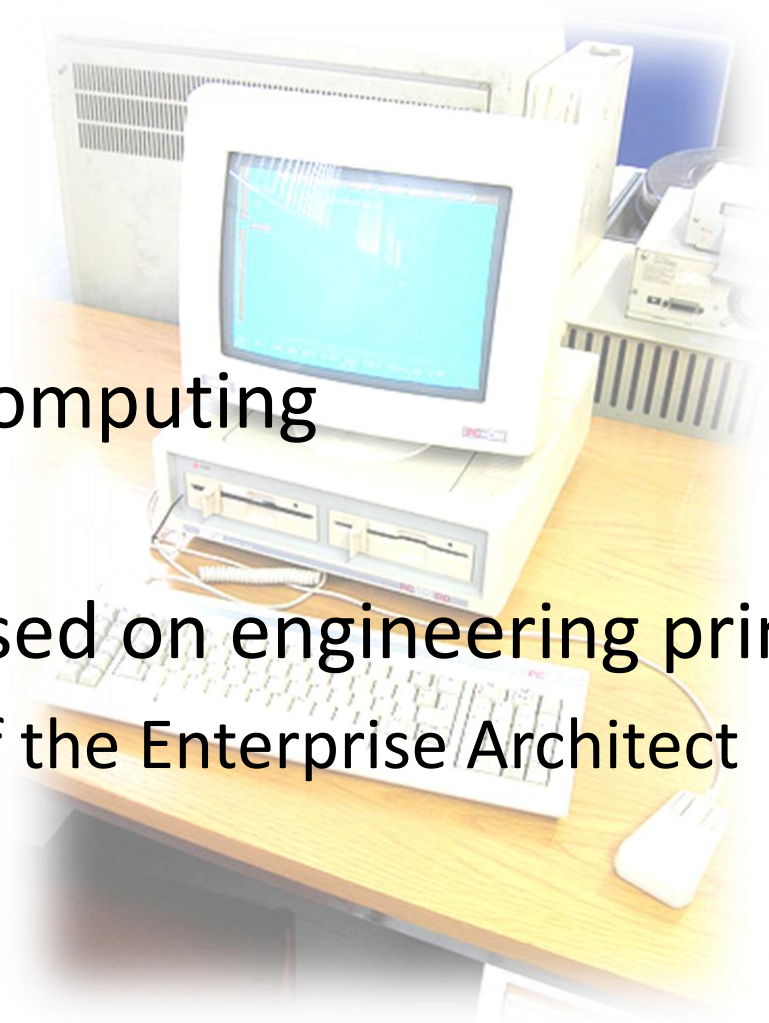
- and scalability, flexibility and *reuse*

# What is responsible architecture?

Layering!

Distributed computing

Process is based on engineering principles  
– the rise of the Enterprise Architect



# It's 2009 (ok, 2010)



<http://www.yorkblog.com/biz/img/iphone.jpg>

# It's 2009 (ok, 2010)

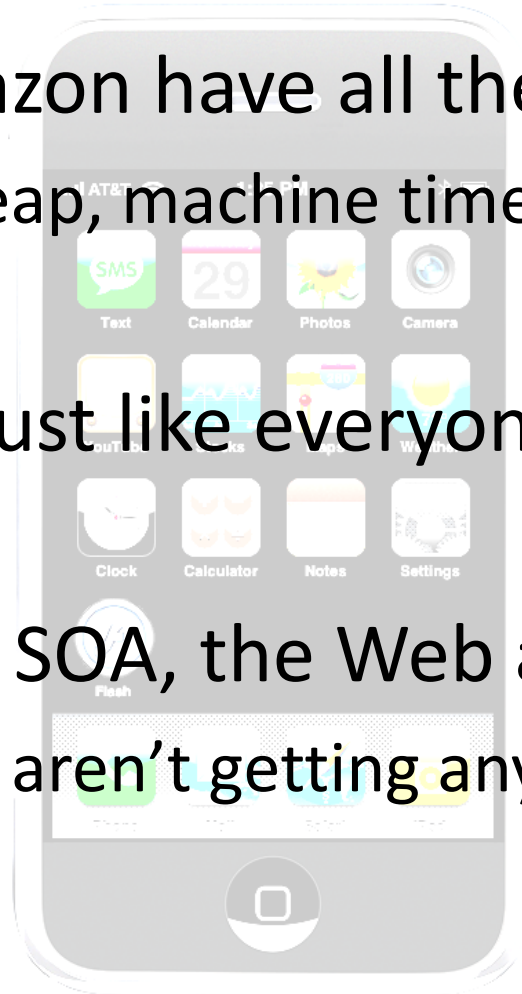
Google and Amazon have all the computers

- Storage is cheap, machine time is cheap

Architects look just like everyone else!

They care about SOA, the Web and the Cloud

- oh, and CPUs aren't getting any faster, just *wider*





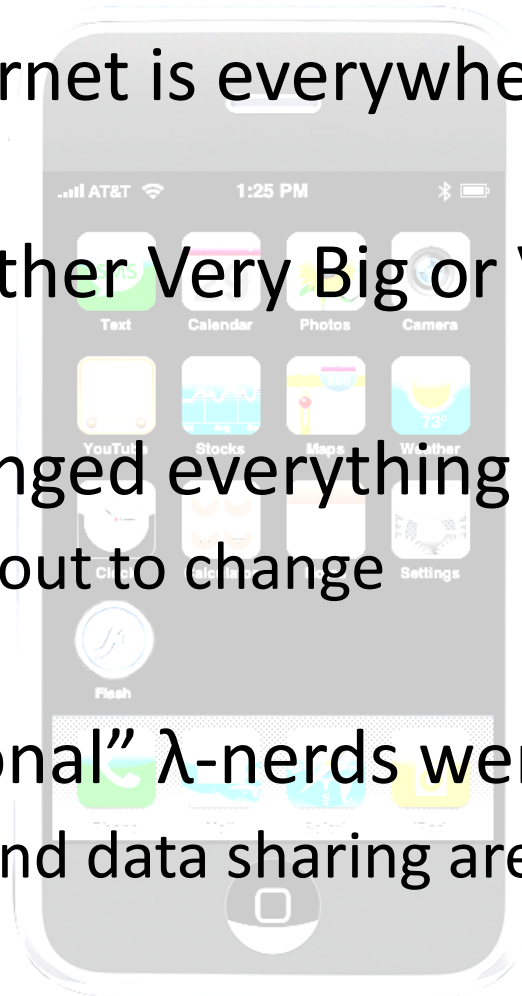
# What is responsible architecture?

Realising the Internet is everywhere

Computers are either Very Big or Very Small

The Web has changed everything  
– and is itself about to change

The “pure functional”  $\lambda$ -nerds were right!  
– Concurrency and data sharing are an issue



# What is responsible architecture?

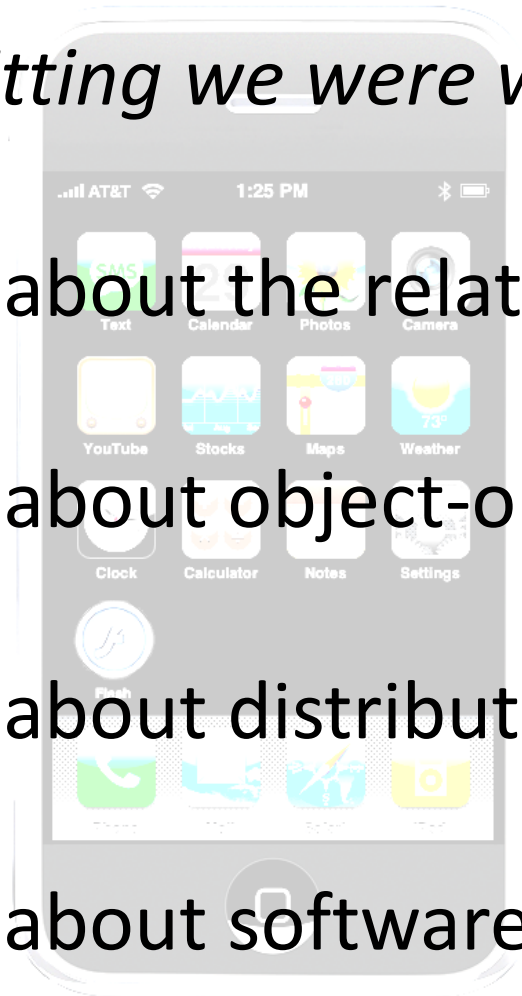
*Admitting we were wrong!*

We were wrong about the relational model

We were wrong about object-orientation

We were wrong about distributed computing

We were wrong about software process



# How about irresponsible architecture?



<http://www.flickr.com/photos/zigazou76/3702501888/>

# How about irresponsible architecture?

Inconsistent data!

- Eventually Consistent is good enough

Storing your data on other people's servers

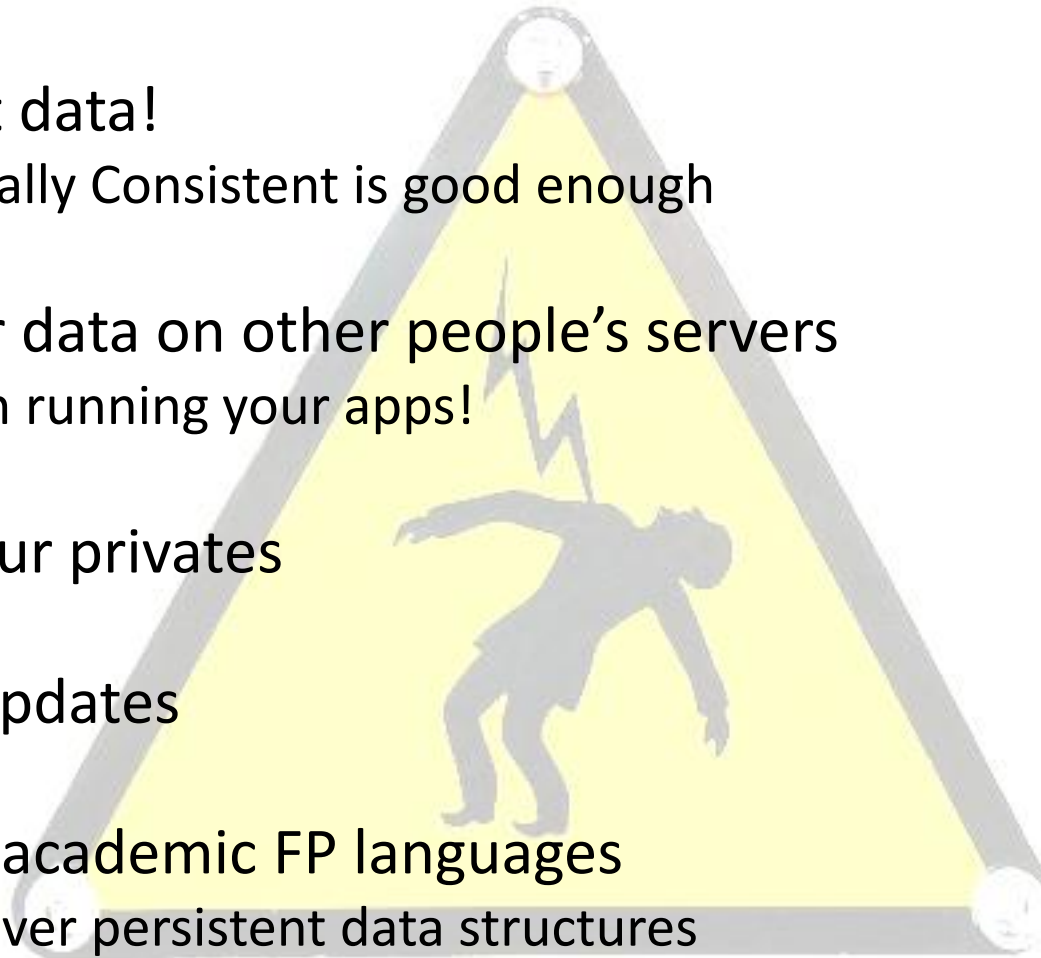
- or even running your apps!

Exposing your privates

Polling for updates

Using fancy academic FP languages

- and clever persistent data structures





# How about irresponsible architecture?



## ***The Counterintuitive Web***

*"If the Web wasn't so successful, it'd be dismissed as an architectural clown."*

## ***Patterns for the People***

*"...sharing design and bridging rather than barricading different levels of expertise."*



## ***Simplicity***

*"for architects who think that ESBs and even J2EE might have been a massive fraud."*



## ***LMAX***

*"How to do over 100K contended complex business transactions per second at < 1ms latency"*



## ***Command-Query Responsibility Segregation***

*"Many are surprised by the added complexity of messaging patterns"*





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