

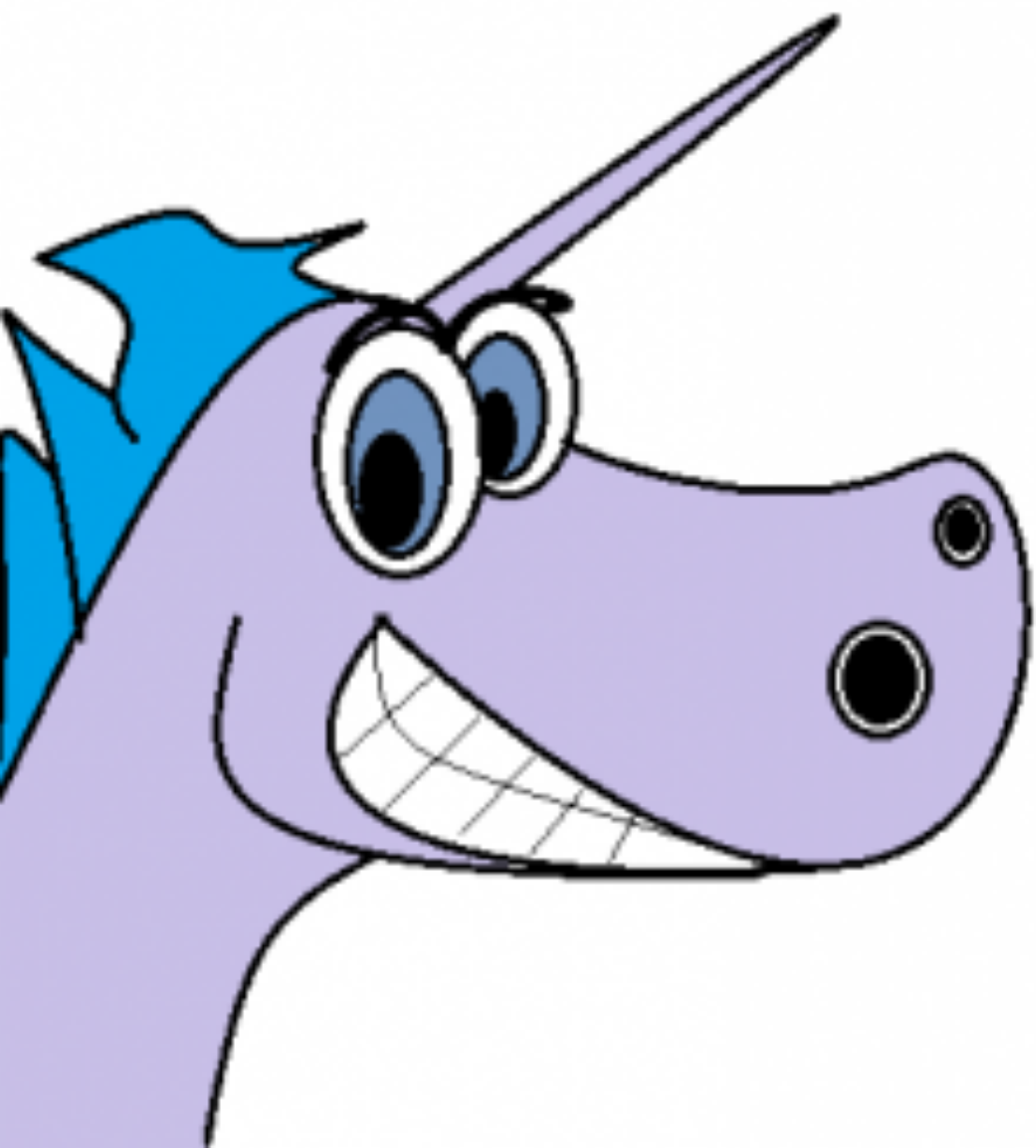


Single Page Web Applications

with

Scala and Spray

SPA HISTORY



'95 – Applets

'96 – Flash

'96 – IFRAME

'99 – XML HTTP ActiveX Control

'05 – AJAX

'05 – SPA

'06 – Google Web Toolkit

'07 – SILVERLIGHT

PROBLEMS

Navigation

SEO

Analytics

ErrorTracking

Navigation

#FRAGMENT ID

SEO

- GOOGLE PROTOCOL [_escaped_fragment_]
- USER AGENTS [DuckDuckBot/1.1] [facebookexternalhit/1.1]

Analytics

DYI

ErrorTracking

DYI

BENEFITS



PERFORMANCE

Shorter time to interactivity

Higher request turnover

Greater responsiveness

Lower server load

Less traffic

SEPARATION OF ROLES

Client / Server

DRY

Multiple Platforms

MAIN CHANGE

Logic: server -> client

Routing

Data Binding

Templating

Form Handling

IoC / DI

Async

Modularisation

Offline

Testing

MVC / MVVM

Routing

Data Binding

Templating

Form Handling

IoC / DI

Async

Modularisation

Offline

Testing

MVC / MVVM



Spine



batman.js

canjs



ANGULARJS
by Google



Sencha



HTML

HTTP

views

controllers

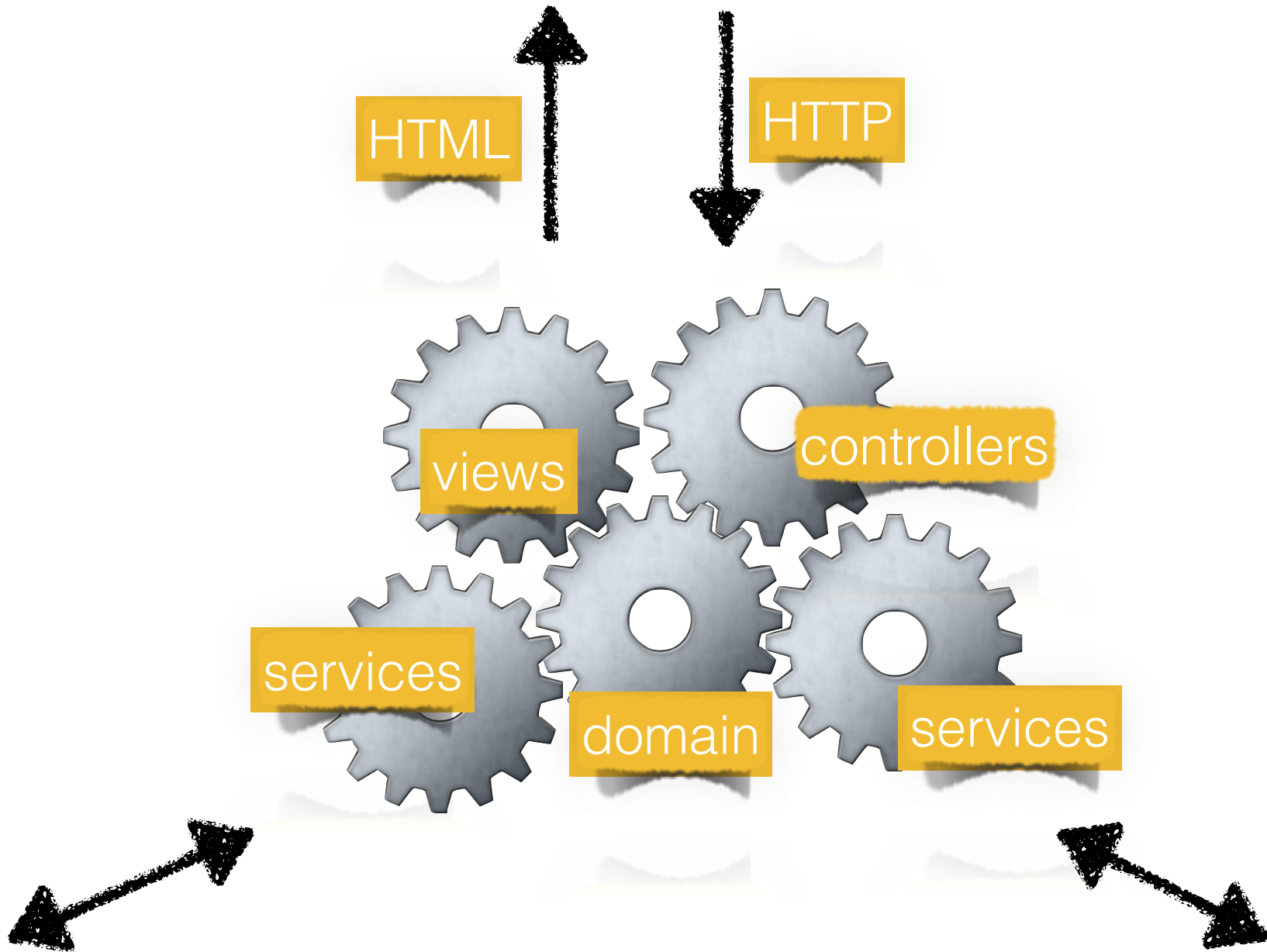
services

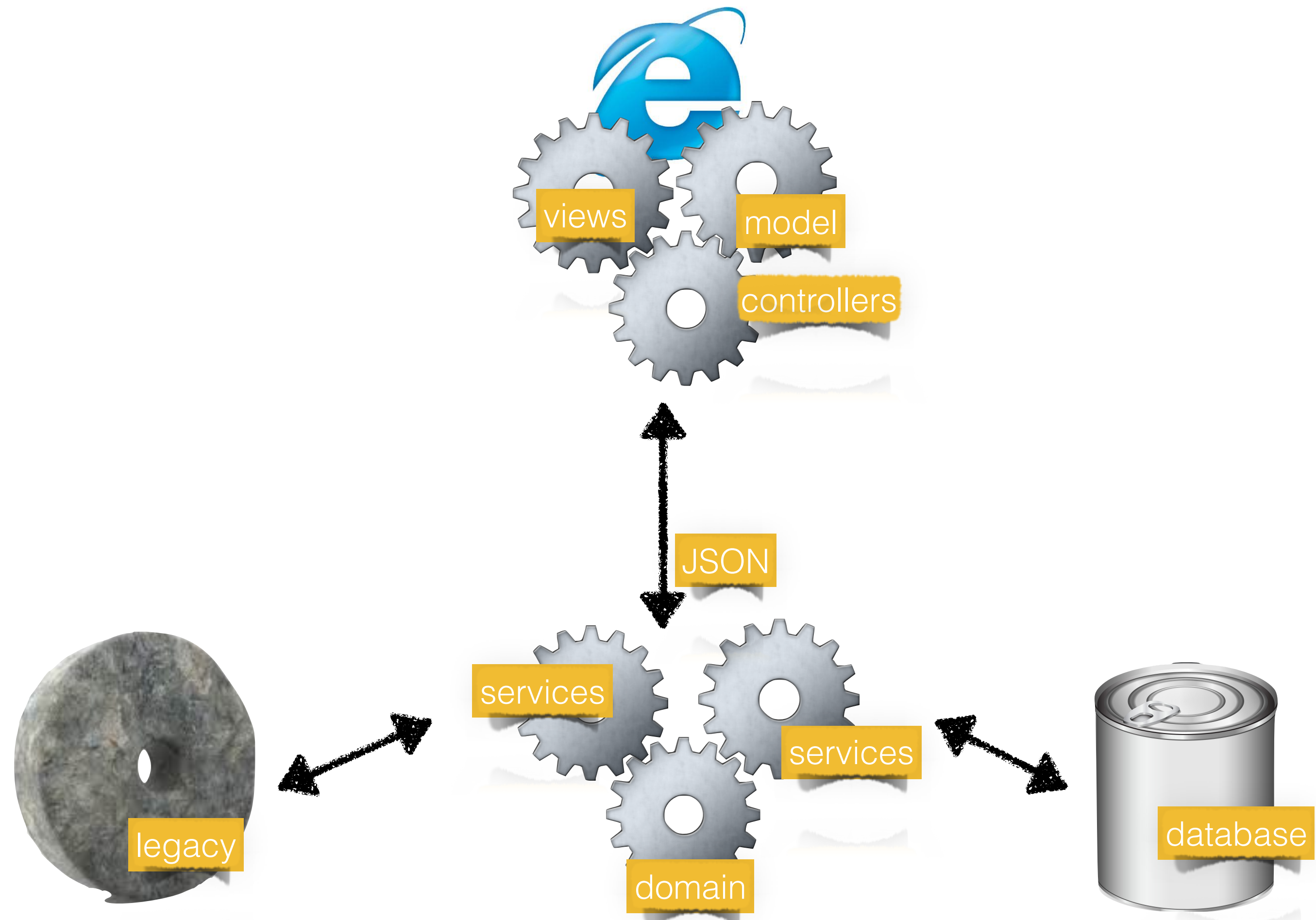
domain

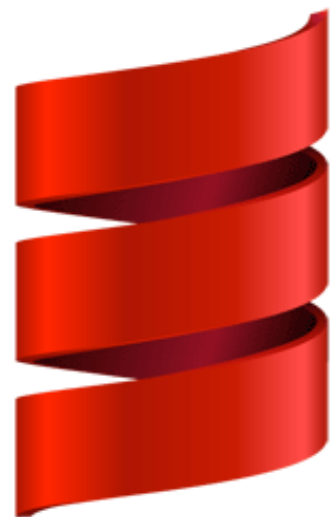
services

legacy

database







Scala



akka

spray



Scalable

Object-Oriented

Functional

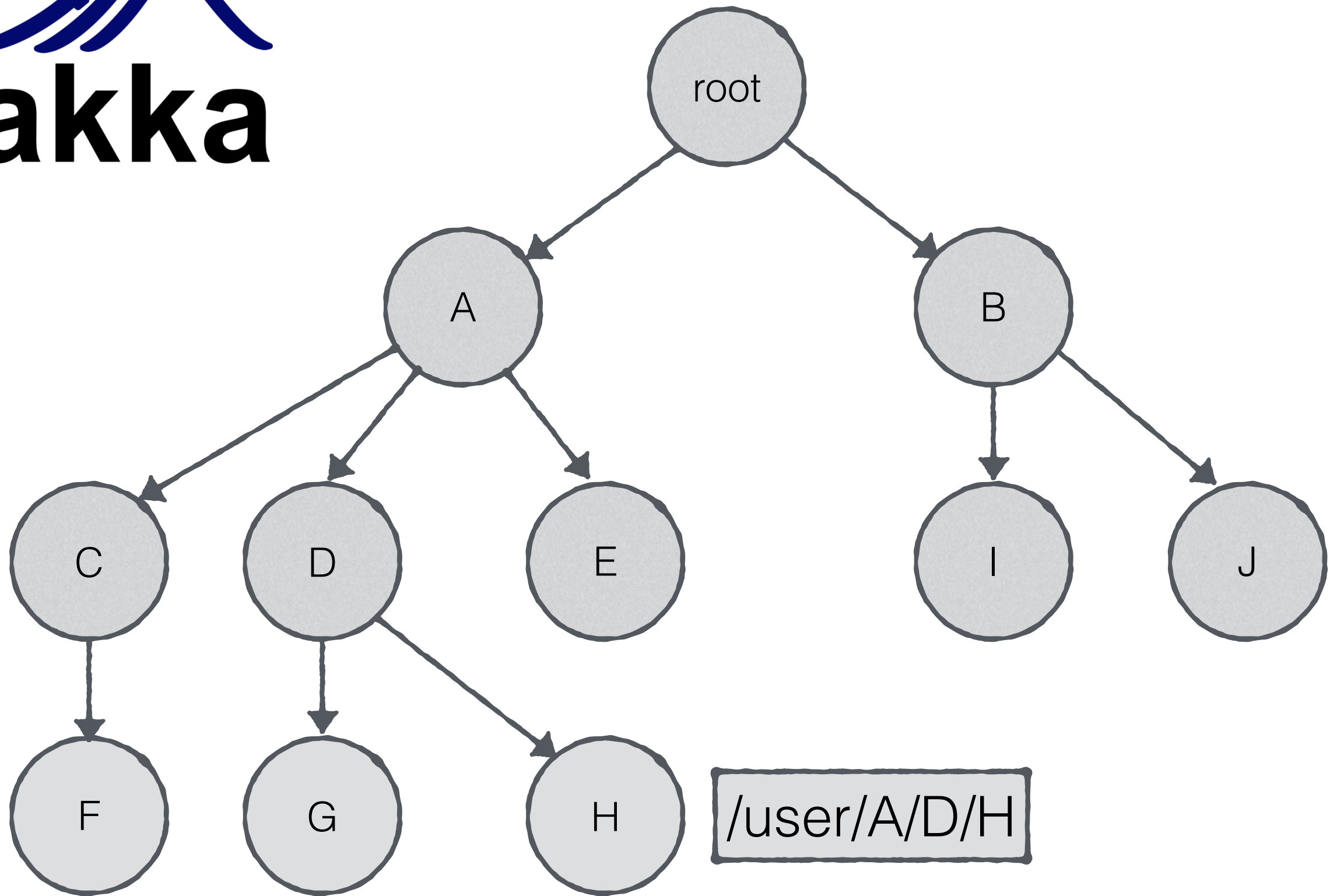
Seamless Java Interop

Functions are Objects



"A toolkit and runtime for building highly concurrent, distributed, and fault-tolerant event-driven applications on the JVM"

Source: <http://akka.io>



MODULES

Persistence

Clustering

HTTP

Java



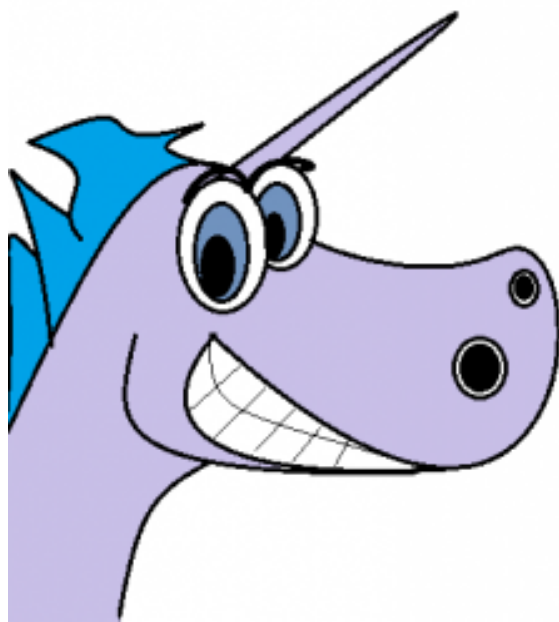
REST/HTTP

Scala/Akka

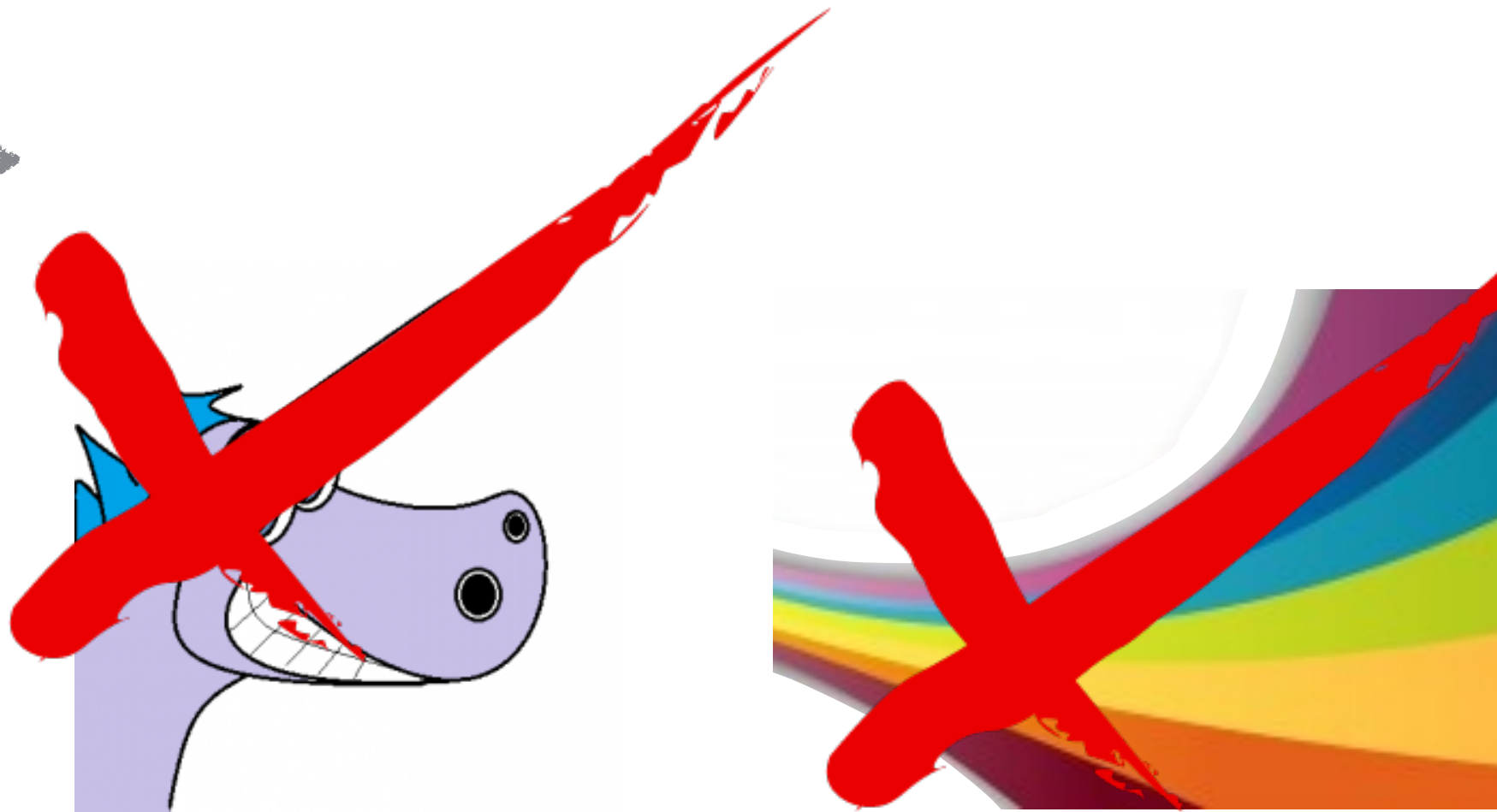
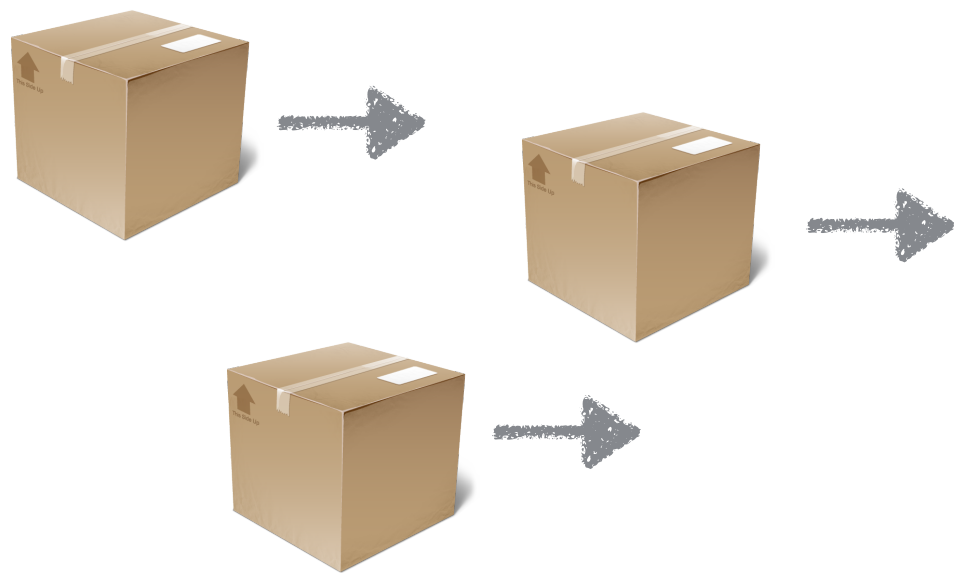
Async, actor based

Lightweight

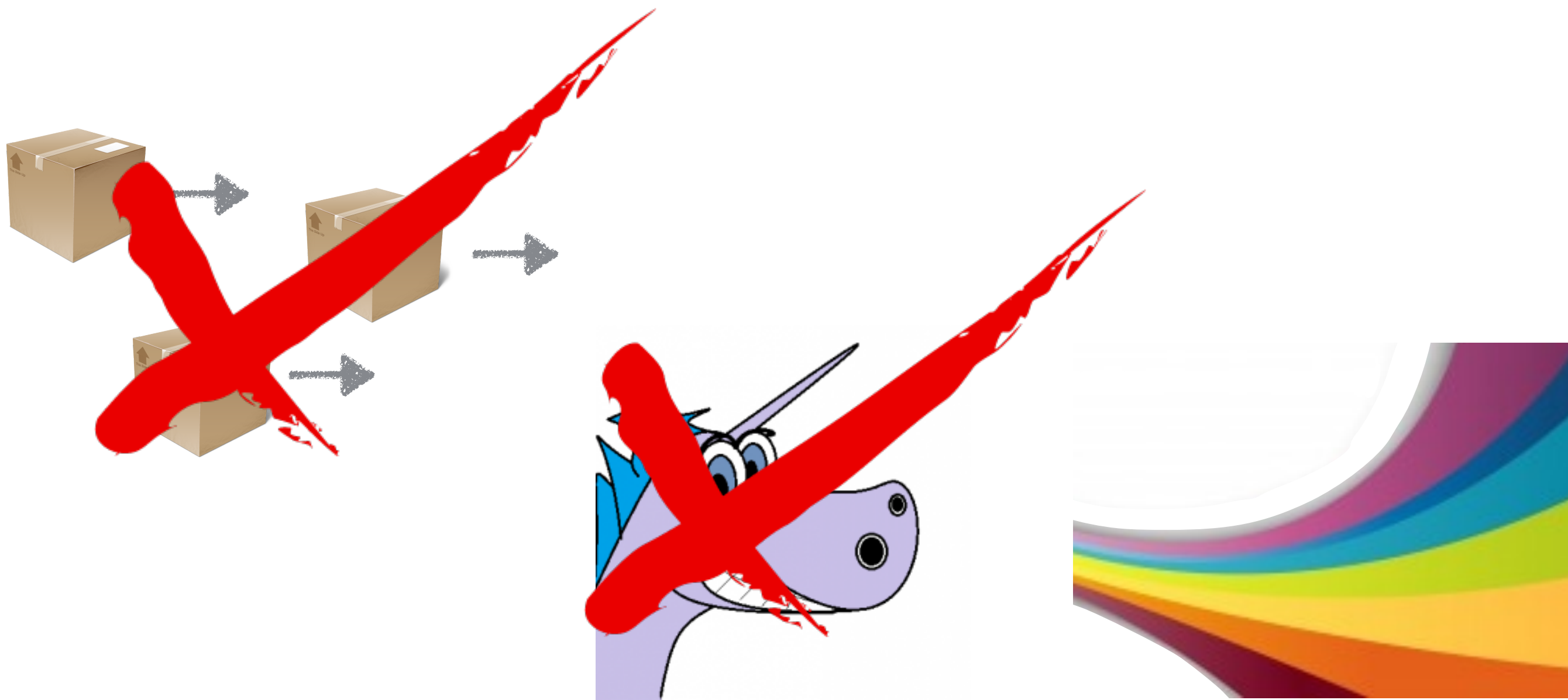
MOTIVATION



MOTIVATION



AKKA-HTTP



COMPONENTS

SPRAY-ROUTING
high-level
server-side

SPRAY-CLIENT
high-level
client-side

SPRAY-HTTP
data model

SPRAY-CAN
low-level HTTP
server- and client-side

THE IO STACK

Application

spray-routing

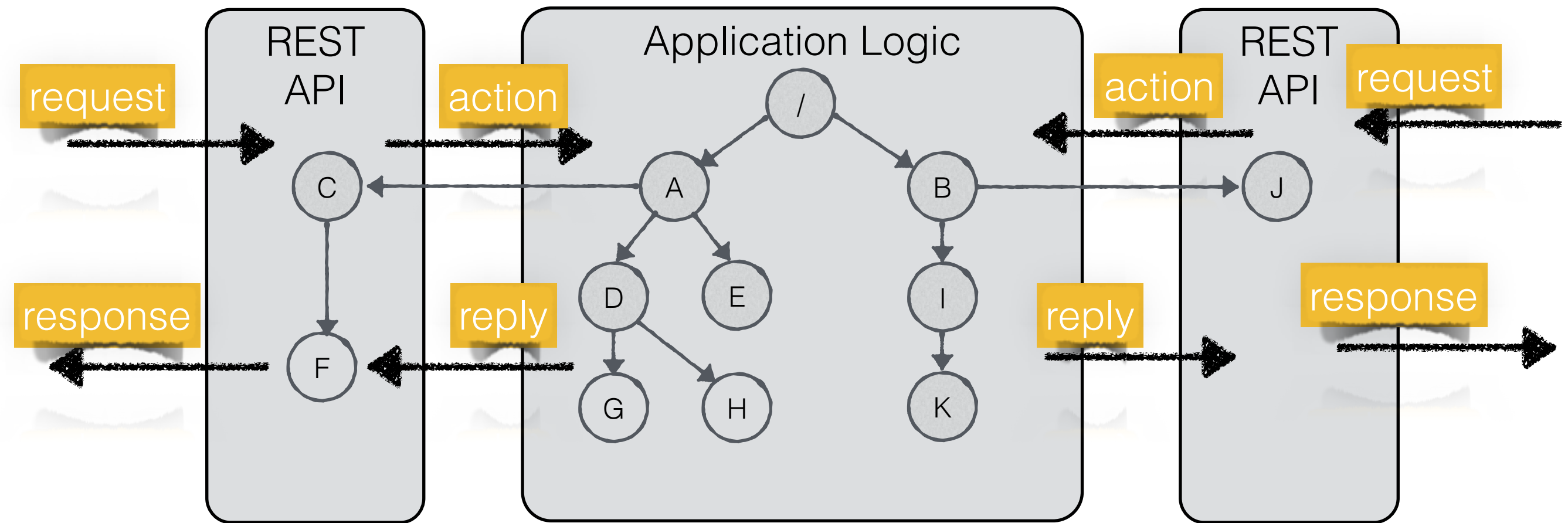
spray-can

akka IO

Java NIO (JDK)

OS Level IO

API LAYER



Typesafe Activator

<http://typesafe.com/platform/getstarted>



Tutorials

Seeds

Filter templates

★ **Reactive Maps**

AKKA PLAYFRAMEWORK SCALA REACTIVE

★ **Reactive Stocks**

SAMPLE JAVA SCALA PLAYFRAMEWORK AKKA REACTIVE

★ **Hello Akka!**

BASICS AKKA JAVA SCALA STARTER

★ **Hello Scala!**

BASICS SCALA STARTER

★ **Hello Slick! (Slick 2.1)**

BASICS SLICK STARTER SCALA

Gilt Groupe Play Application Template

PLAYFRAMEWORK SCALA

Spray and Websocket interfaces to actors

AKKA SPRAY TCP WEBSOCKET

Config, Guice, Akka and Spray

SCALA SPRAY AKKA JSON4S SCALATEST GUICE DEPEDENCY-IN

Play Slick quickstart

PLAY SCALA STARTER SLICK

Play with Guice

PLAYFRAMEWORK GUICE DEPENDENCY-INJECTION

Create a new app

You will be learning and writing code in seconds...

1 Choose a template

2 Specify a location

3 Activate it!

Filter templates by a tag:

akka

angular

database

java

java8

javascript

play

reactive

scala

slick

spray

starter

websocket

Open existing app

tweetmap-workshop

/Users/slasch/work/personal/tweetmap-workshop

@slavaschmidt

slavaschmidt@gmx.net