



Remove the “M” from MVC

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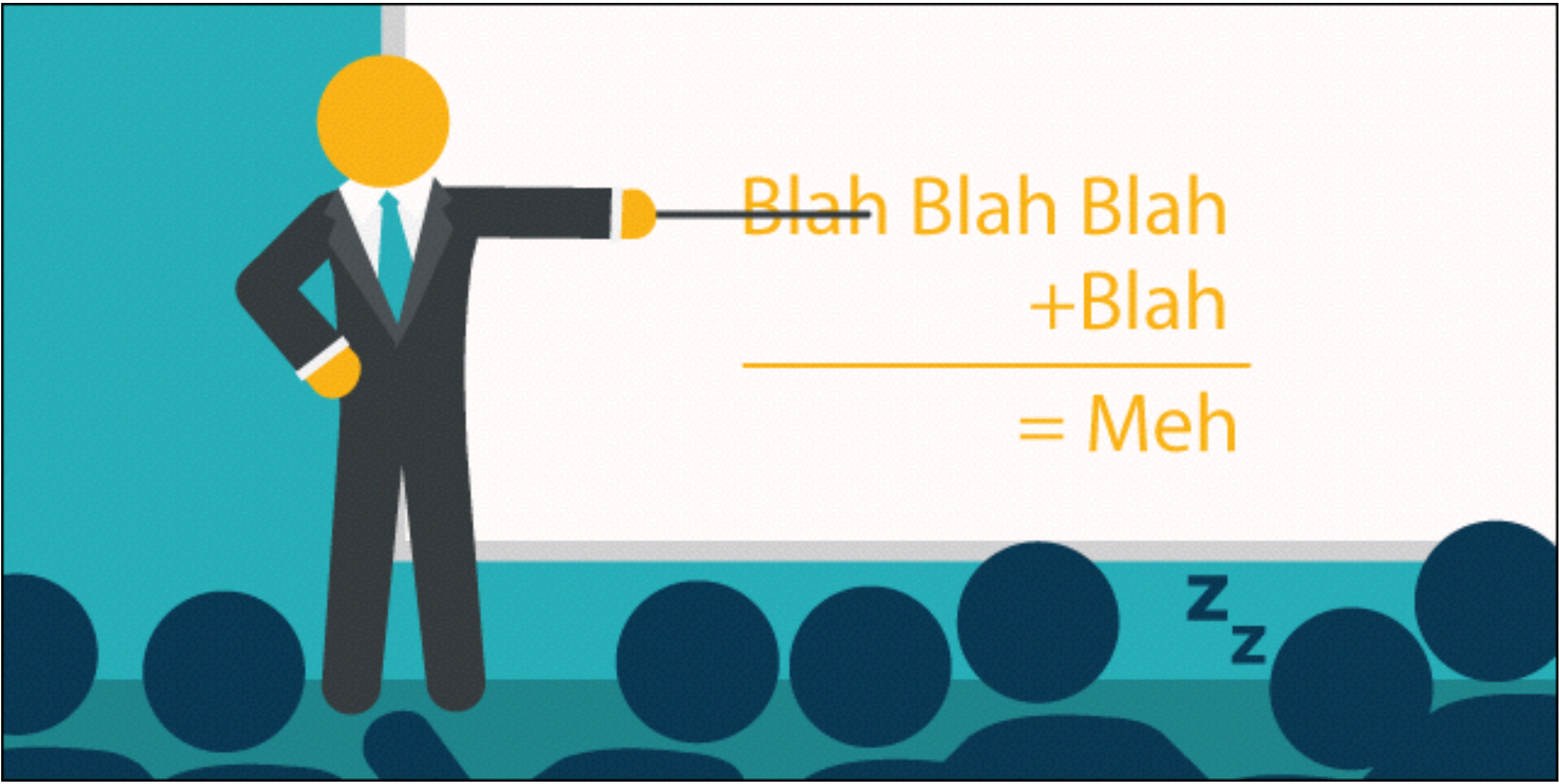
About Me

- I'm old (compared to you)
- Coding forever (>30 years)
- Professionally since 1986
- Consulting since 1991
- Riot since 2008 (OMG 7 years)
- Languages
 - RPG II, III, 400 [1986]
 - Smalltalk [1992]
 - Java [1996]
 - HTML/Javascript/CSS [2002]
 - Flex/AIR [2007]
 - iOS/Android [2012]
 - C++/Go [2015/2016]
 - Cross-platform mobile [2016/2017]
- Sharing
 - brax.tv



Objectives





Blah Blah Blah
+ Blah
= Meh

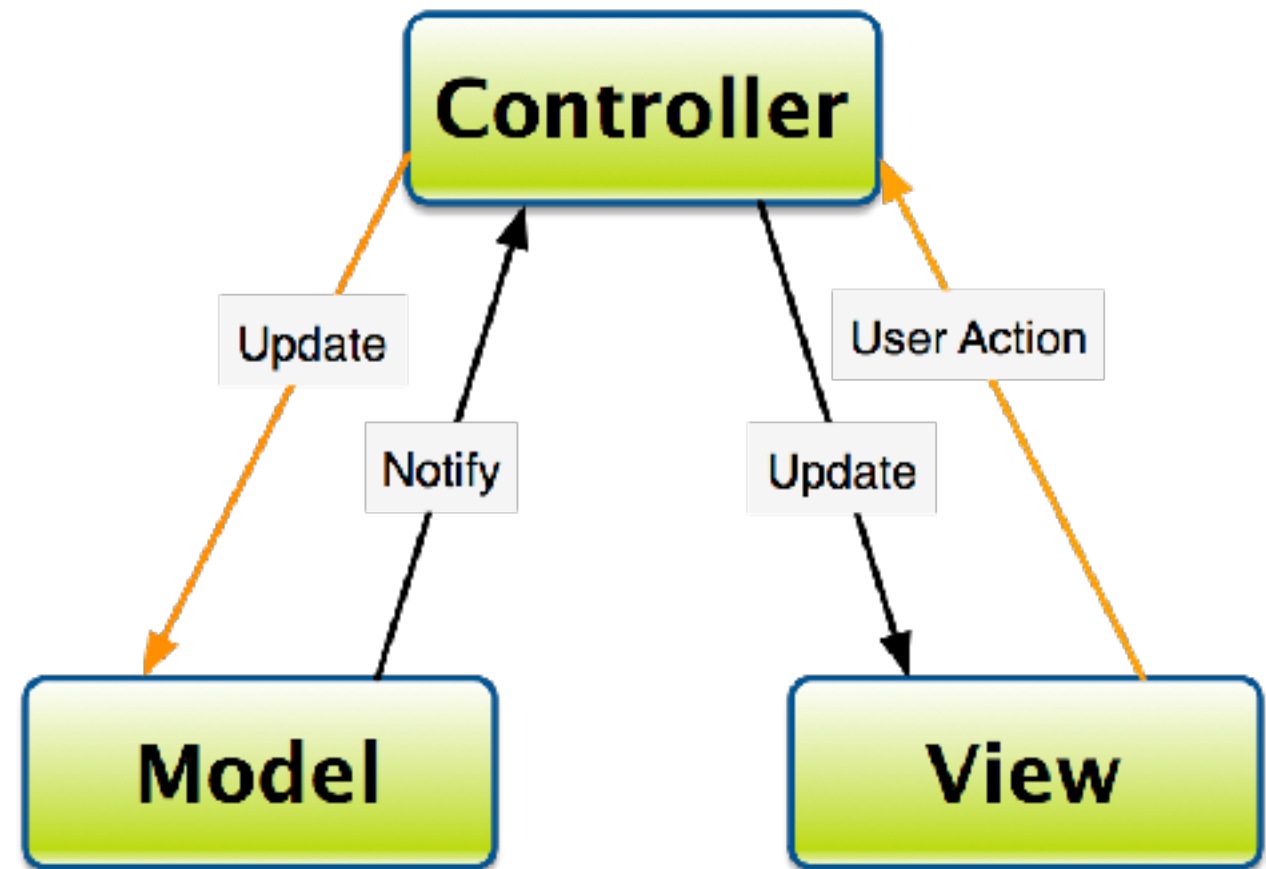
The “**M**”

as we know it

in modern **MVC**

is **unnecessary**

in many apps



Story
TIME





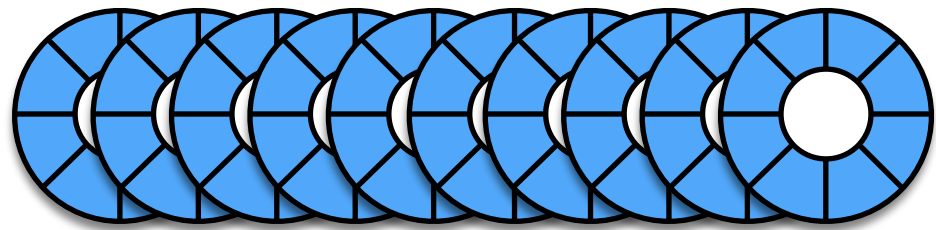
2011



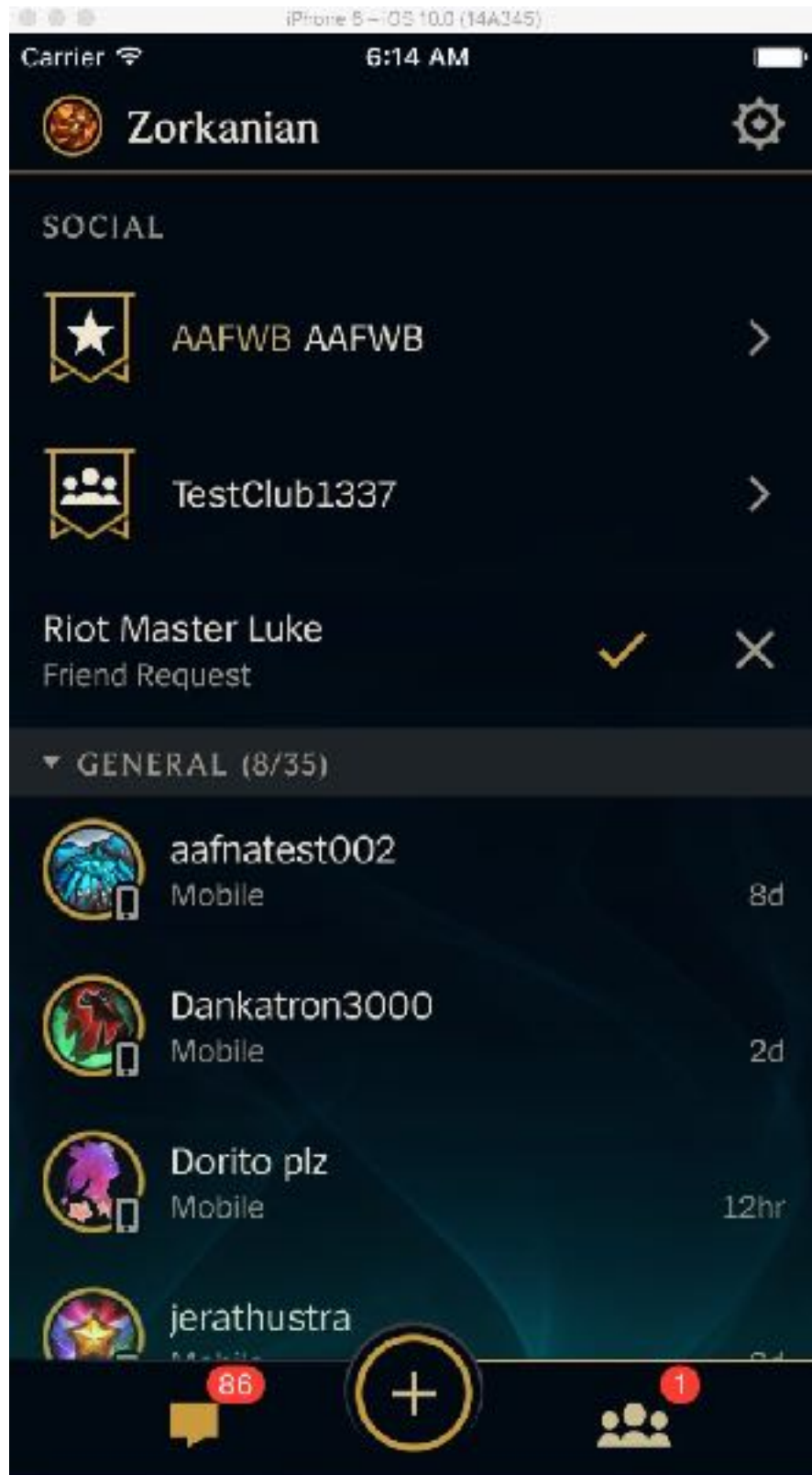


tumblr.





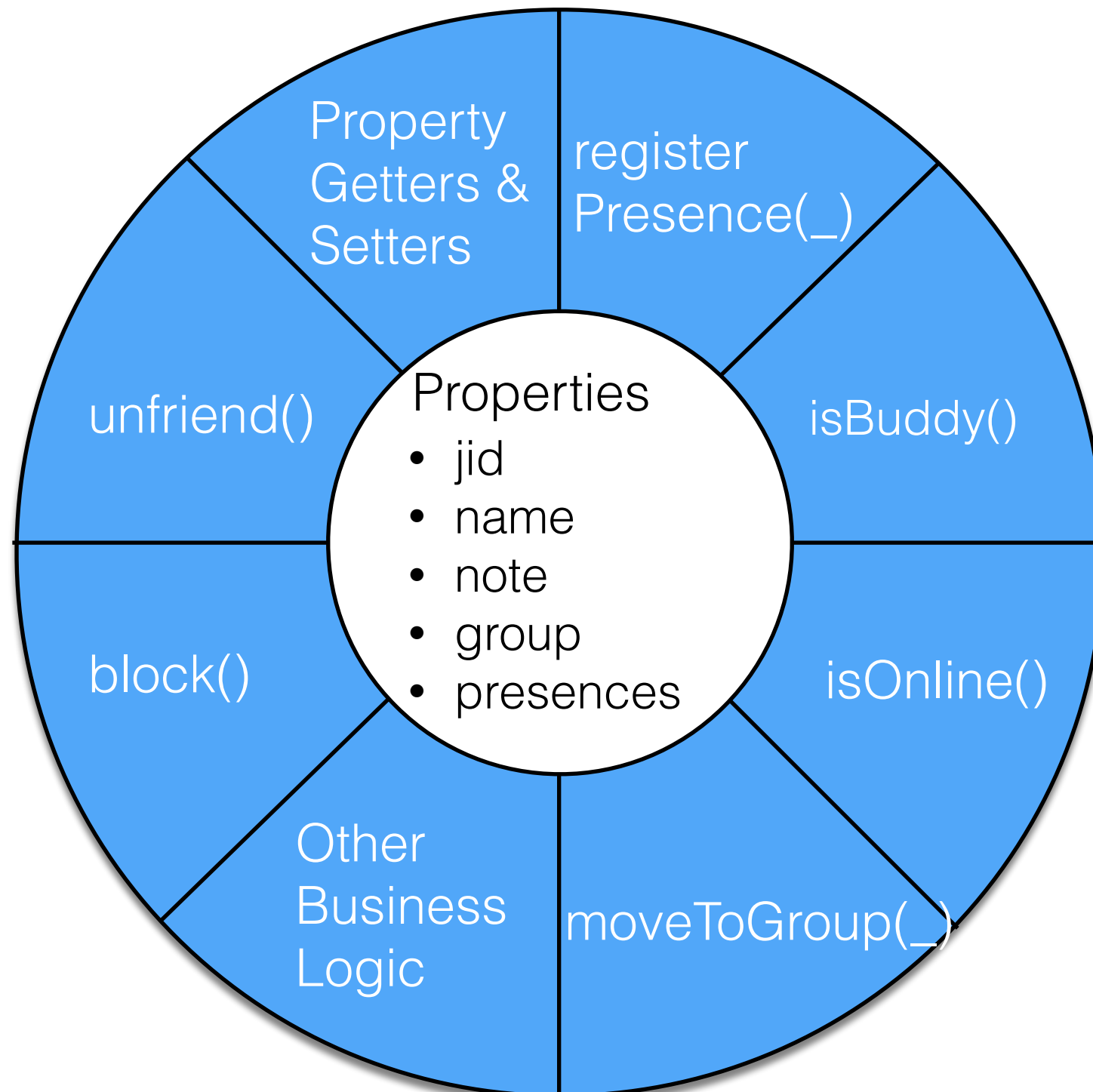
Model Objects in Memory
Lots of them....



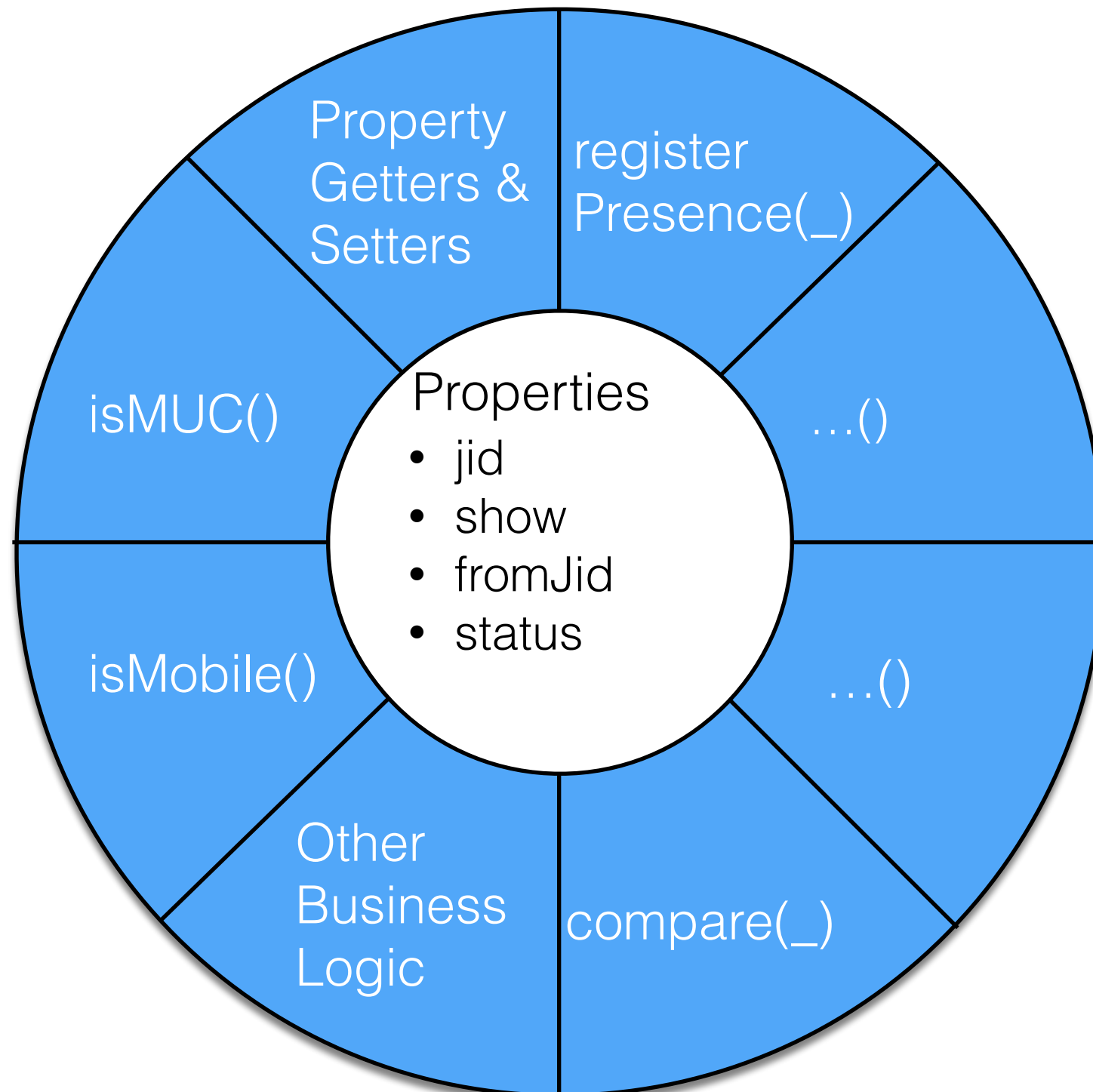
REST
XMPP

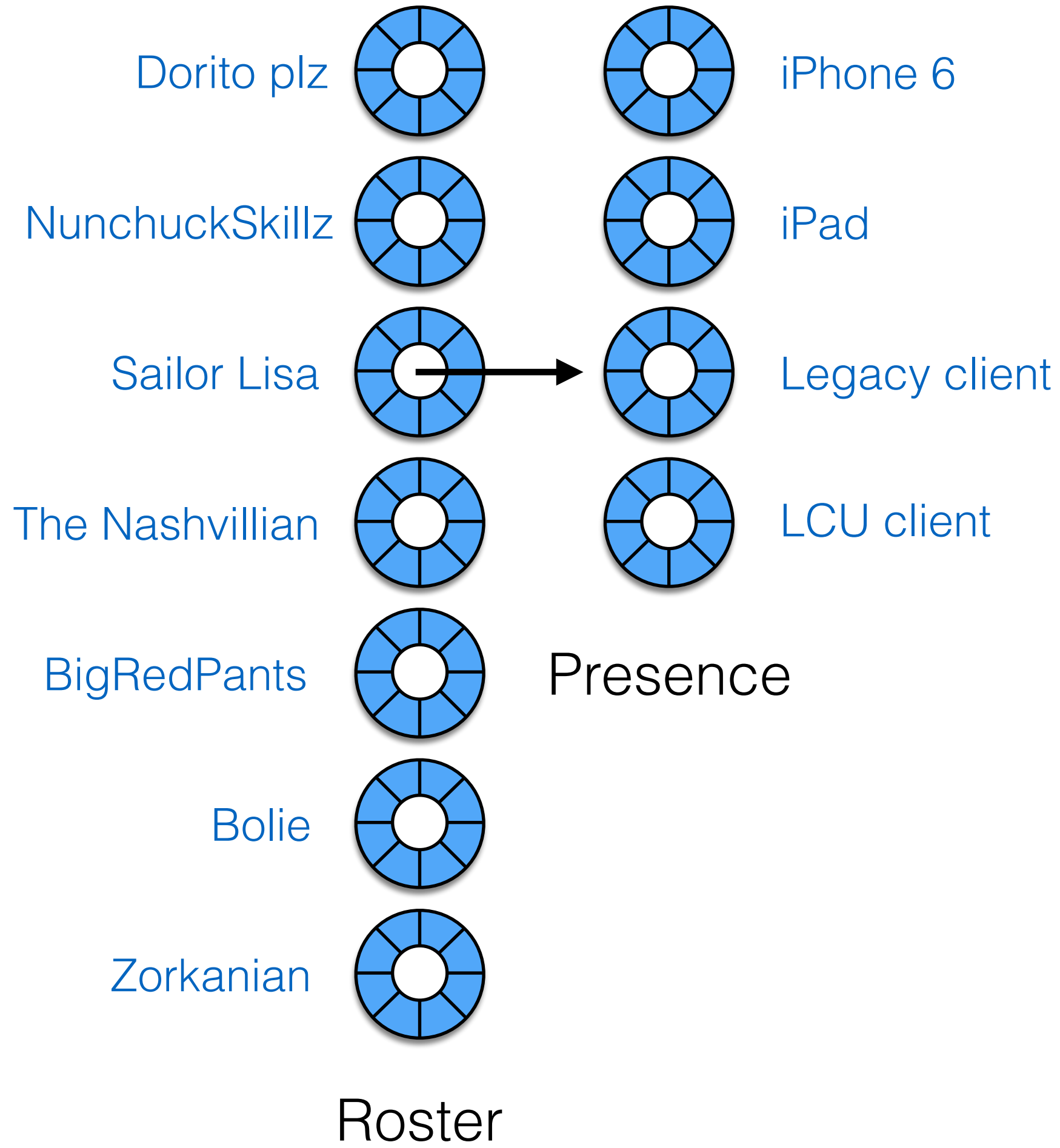


Buddy



Presence







iOS team



Android team

Developing Android REST Client Applications

Virgil Dobjanschi
5/20/2010

Google 

0:05 / 59:12



Google I/O 2010 - Android REST client applications



Google Developers

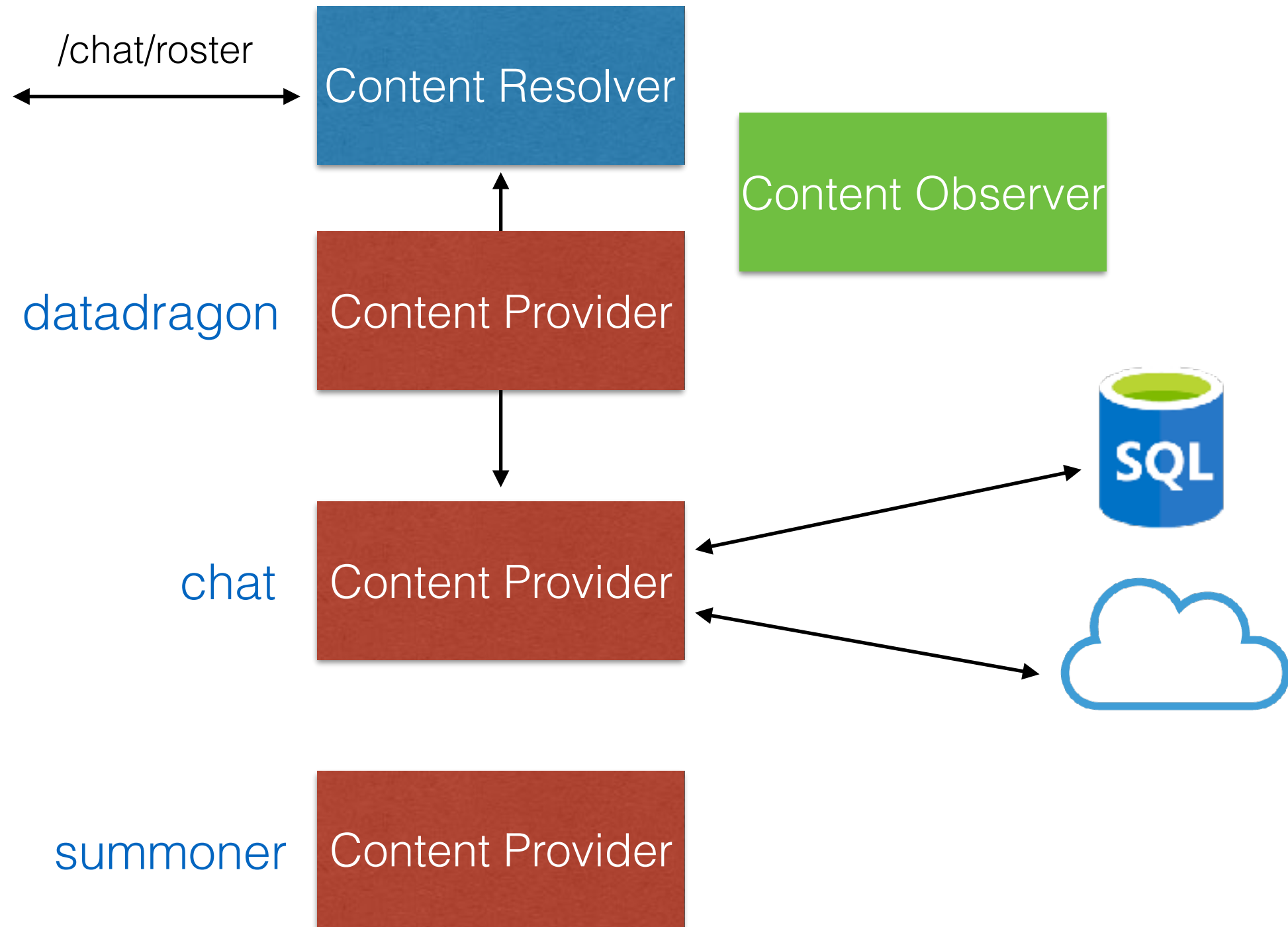
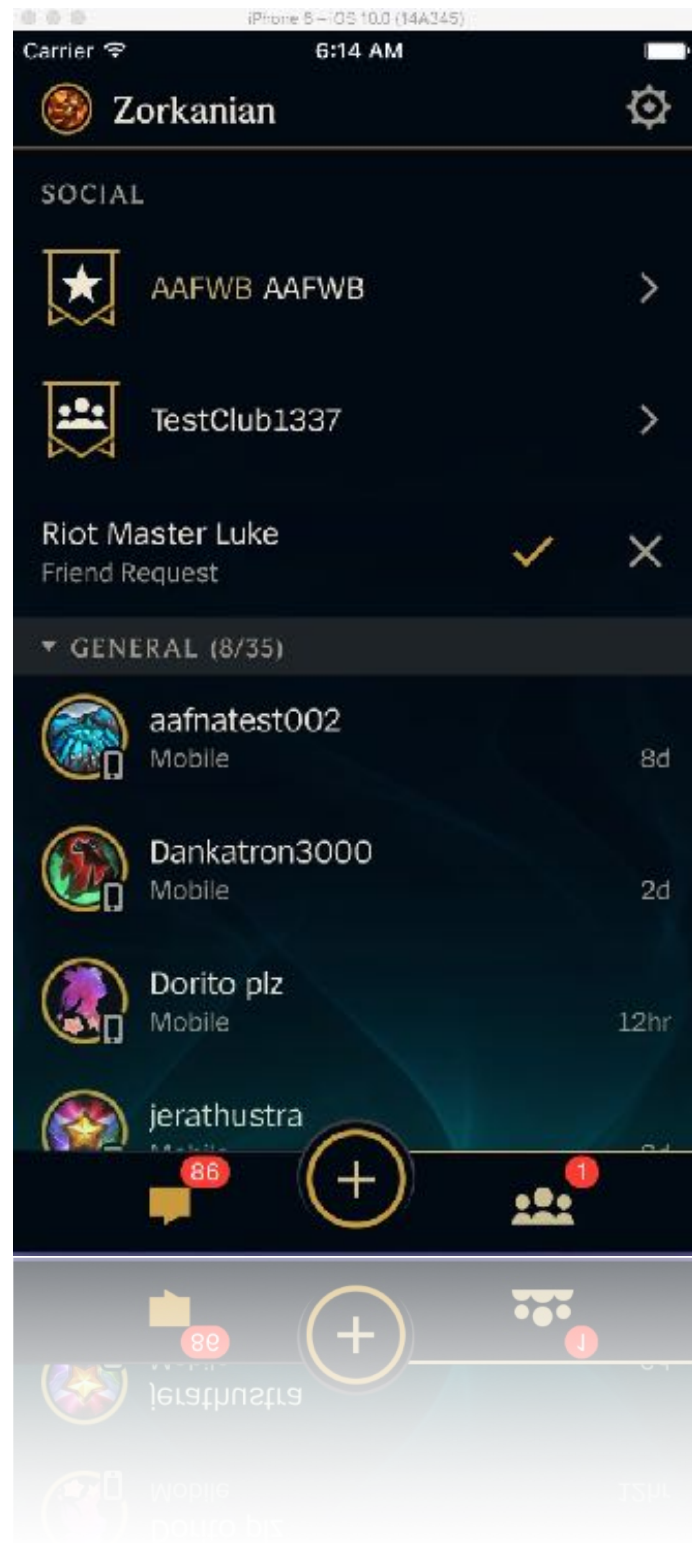
 961,514

219,298 views

 Add to  Share  More

 1,145  15

Key Concepts



Key Concepts: URI's

- **/chat/roster**
- **/chat/roster/groups**
- **/chat/roster/groups/Monday**
- **/chat/roster/groups/Monday/buddies**
- **/chat/roster/groups/Monday/buddies/BigRedPants**
- **/configuration/na/chatServer**

Key Concepts: ContentResolver

```
protocol ContentResolver {  
    func insert(uri:String, values:[String, AnyObject]) -> Int64  
  
    func update(uri:String,  
        values:[String, AnyObject],  
        selection: String? = nil) -> Int  
  
    func delete(uri:String, selection:String? = nil) -> Int  
  
    func query(uri:String,  
        projection: [String]? = nil,  
        selection: String? = nil,  
        grouping: [String]? = nil,  
        groupSelection: String? = nil,  
        sort: String? = nil) -> ResultSet  
  
    func addContentObserver(uri:String, Notification->Void)  
    func removeContentObserver(uri:String, Notification->Void)  
}
```


Key Concepts: Projection

jid	name	note	group	is_online
<u>sum123@pvp.net</u>	Sailor Lisa	Plays Annie	Monday	FALSE
<u>sum345@pvp.net</u>	Bolie	Jungler	Work	TRUE
<u>sum111@pvp.net</u>	BigRedPants	Jeff Robbins	Work	TRUE
<u>sum289@pvp.net</u>	Zorkanian	Bob Smith	Ranked	FALSE
<u>sum942@pvp.net</u>	Dorito Plz	Nick	Monday	TRUE
<u>sum822@pvp.net</u>	GambleDt	Gabriel	Work	FALSE
<u>sum033@pvp.net</u>	Nunchuckskillz	Andy	Ranked	TRUE

Key Concepts: Selection

jid	name	note	group	is_online
sum123@pvp.net	Sailor Lisa	Plays Annie	Monday	FALSE
sum345@pvp.net	Bolie	Jungler	Work	TRUE
sum111@pvp.net	BigRedPants	Jeff Robbins	Work	TRUE
sum289@pvp.net	Zorkanian	Bob Smith	Ranked	FALSE
sum942@pvp.net	Dorito Plz	Nick	Monday	TRUE
sum822@pvp.net	GambleDt	Gabriel	Work	FALSE
sum033@pvp.net	Nunchuckskillz	Andy	Ranked	TRUE

Key Concepts: Sort

jid	name	note	group	is_online
sum123@pvp.net	Sailor Lisa	Plays Annie	Monday	FALSE
sum345@pvp.net	Bolie	Jungler	Work	TRUE
sum111@pvp.net	BigRedPants	Jeff Robbins	Work	TRUE
sum289@pvp.net	Zorkanian	Bob Smith	Ranked	FALSE
sum942@pvp.net	Dorito Plz	Nick	Monday	TRUE
sum822@pvp.net	GambleDt	Gabriel	Work	FALSE
sum033@pvp.net	Nunchuckskillz	Andy	Ranked	TRUE

Combining them all

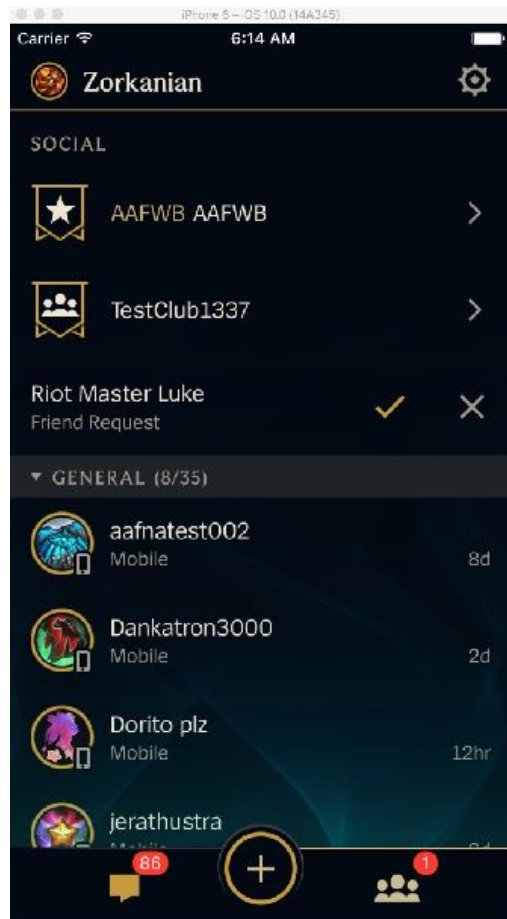
jid	name	note	group	is_online
sum123@pvp.net	Sailor Lisa	Plays Annie	Monday	FALSE
sum345@pvp.net	Bolie	Jungler	Work	TRUE
sum111@pvp.net	BigRedPants	Jeff Robbins	Work	TRUE
sum289@pvp.net	Zorkanian	Bob Smith	Ranked	FALSE
sum942@pvp.net	Dorito Plz	Nick	Monday	TRUE
sum822@pvp.net	GambleDt	Gabriel	Work	FALSE
sum033@pvp.net	Nunchuckskillz	Andy	Ranked	TRUE

Introducing the Model: The ResultSet

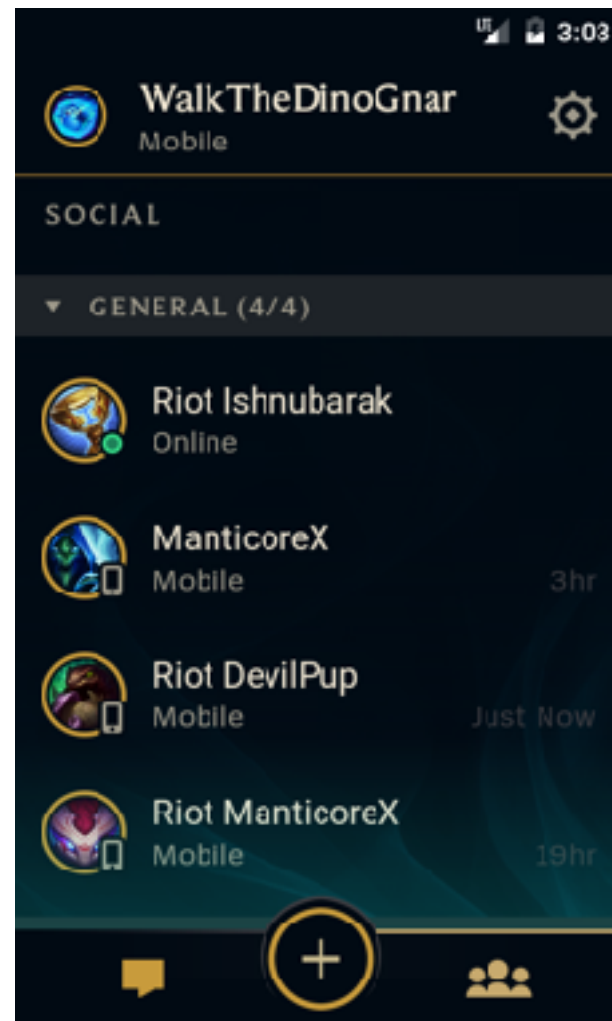
jid	name	note	group	is_online
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sum111@pvp.net	BigRedPants	Jeff Robbins	Work	TRUE
sum289@pvp.net	Zorkanian	Bob Smith	Ranked	FALSE
sum942@pvp.net	Dorito Plz	Nick	Monday	TRUE
sum822@pvp.net	GambleDt	Gabriel	Work	FALSE
sum033@pvp.net	Nunchuckskillz	Andy	Ranked	TRUE

- Every view has the exact same Model
- Just the data you want, in the order you want
- Works perfectly as the data source for UITableView/UICollectionView

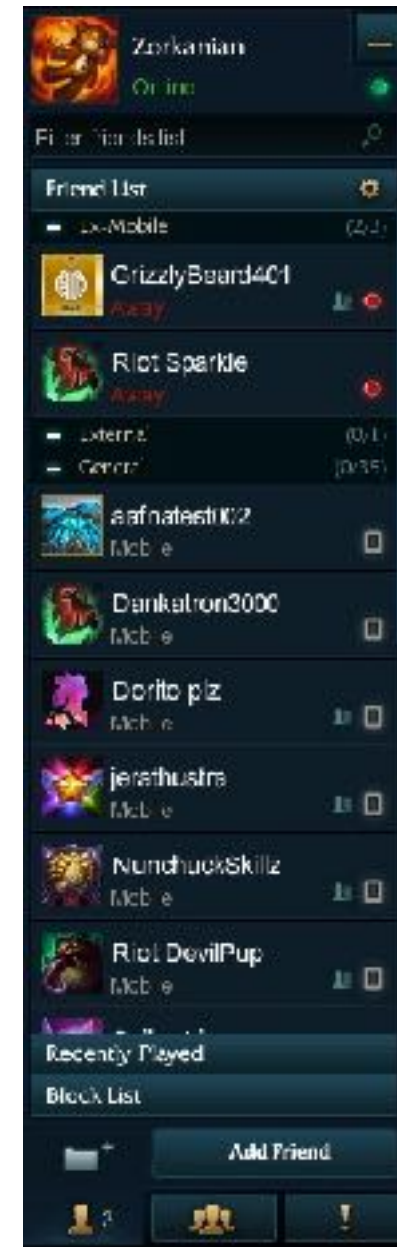
Where are we now?



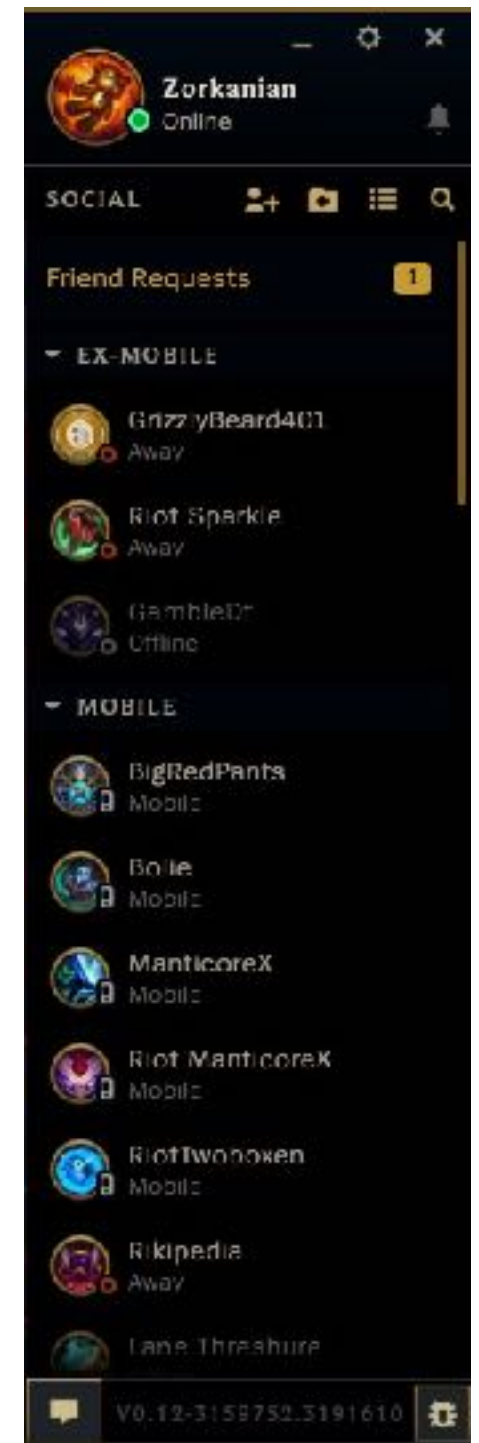
Mobile
iOS



Mobile
Android



Legacy
Client
(soon to be retired)



Beta
Client

Summary

- **Dump the traditional Model layer**
- **Watch that Google I/O session from 2010**
- **Favor ResultSets as your Model layer**
- **Learn SQL**
- **Employ standard techniques (RESTFUL/URI)**
- **Profit!!!**
- **Have a GREAT CocoaConf-Chicagan conference**

References

- **Google I/O YouTube:**
<https://www.youtube.com/watch?v=xHXn3Kg2IQE>
- **Content Provider:**
<https://developer.android.com/guide/topics/providers/content-provider-basics.html>
- **My repo's:**
<https://github.com/JeffBNimble>
- **Riot Engineering Blog**
<https://engineering.riotgames.com/news/building-cross-platform-mobile-apps>
- **Me:**
jeff@nimbleNogginSoftware.com,
[@JeffBNimble](#),
<https://github.com/JeffBNimble>