
移动APP测试的22条军规

By 黄勇 @ ThoughtWorks

Weibo @黄勇Yale



1.设备和平台

- 操作系统
- 设备硬件
- 屏幕尺寸
- 分辨率
- 像素密度

RIVALS	
	Sony Xperia Z2
	Samsung Galaxy S4
	Samsung Galaxy Note 3
	HTC One (M8)



Samsung Galaxy S5

Posted: 24 Feb 2014
Market Status: Released
US carrier availability: Available - Verizon, AT&T, Sprint, T-Mobile, MetroPCS, U.S. Cellular, Cricket, Virgin Mobile, Boost Mobile

PhoneArena rating:
9.1

User rating:
9.2



Apple iPhone 6

Posted: 09 Sep 2014
Market Status: Released
US carrier availability: Available - Verizon, AT&T, Sprint, T-Mobile

PhoneArena rating:
9

User rating:
9



Google Nexus 5

Posted: 31 Oct 2013
Market Status: Released
US carrier availability: Available - Sprint, T-Mobile; Upcoming - AT&T

PhoneArena rating:
9.5

User rating:
9.4

DESIGN

Device type	Smart phone	Smart phone	Smart phone
OS	Android (4.4.2) TouchWiz UI	iOS (8.x)	Android (4.4.4, 4.4.2, 4.4)
Dimensions	 5.59 x 2.85 x 0.32 inches (142 x 72.5 x 8.1 mm)	 5.44 x 2.64 x 0.27 inches (138.1 x 67 x 6.9 mm)	 5.43 x 2.72 x 0.34 inches (137.84 x 69.17 x 8.59 mm)
Weight	 5.11 oz (145 g) the average is 4.9 oz (139 g)	 4.55 oz (129 g) the average is 4.9 oz (139 g)	 4.59 oz (130 g) the average is 4.9 oz (139 g)
Body material		Aluminium	
Rugged	Water, Dust resistant		
IP certified	IP 67		

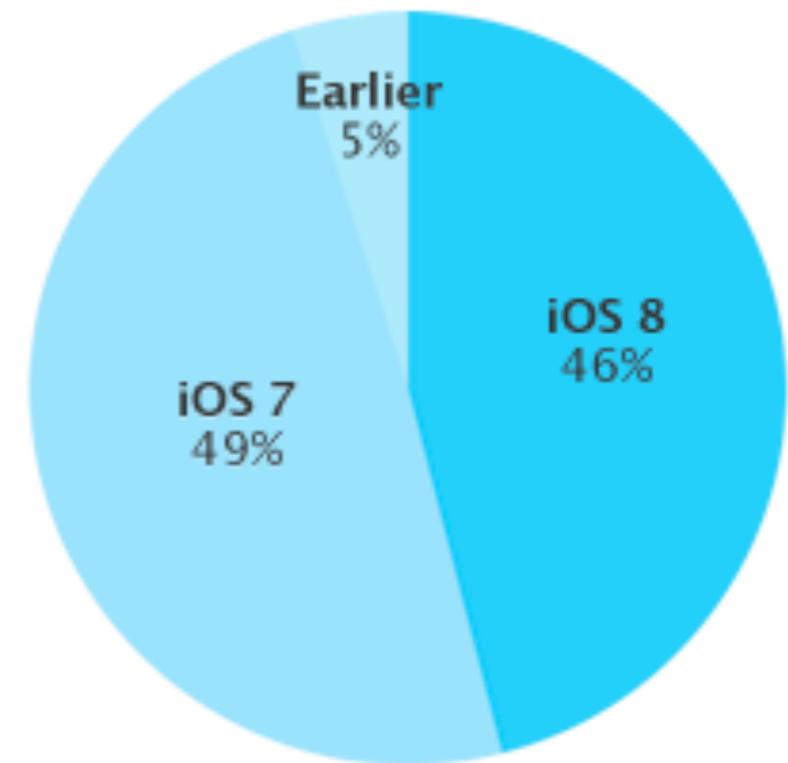
DISPLAY

Physical size	 5.1 inches	 4.7 inches	 5.0 inches
Resolution	 1080 x 1920 pixels	 750 x 1334 pixels	 1080 x 1920 pixels
Pixel density	 432 ppi	 326 ppi	 445 ppi

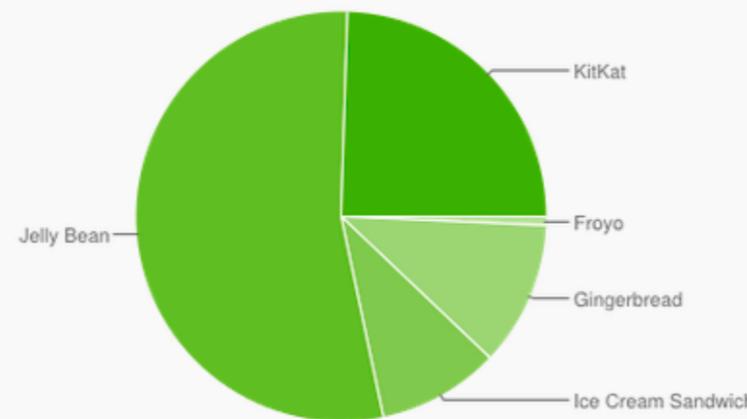
1.设备和平台

- Google Analytics
- Adobe Omniture
- iOS版本占有率
- Android版本占有率

46% of devices are using iOS 8.



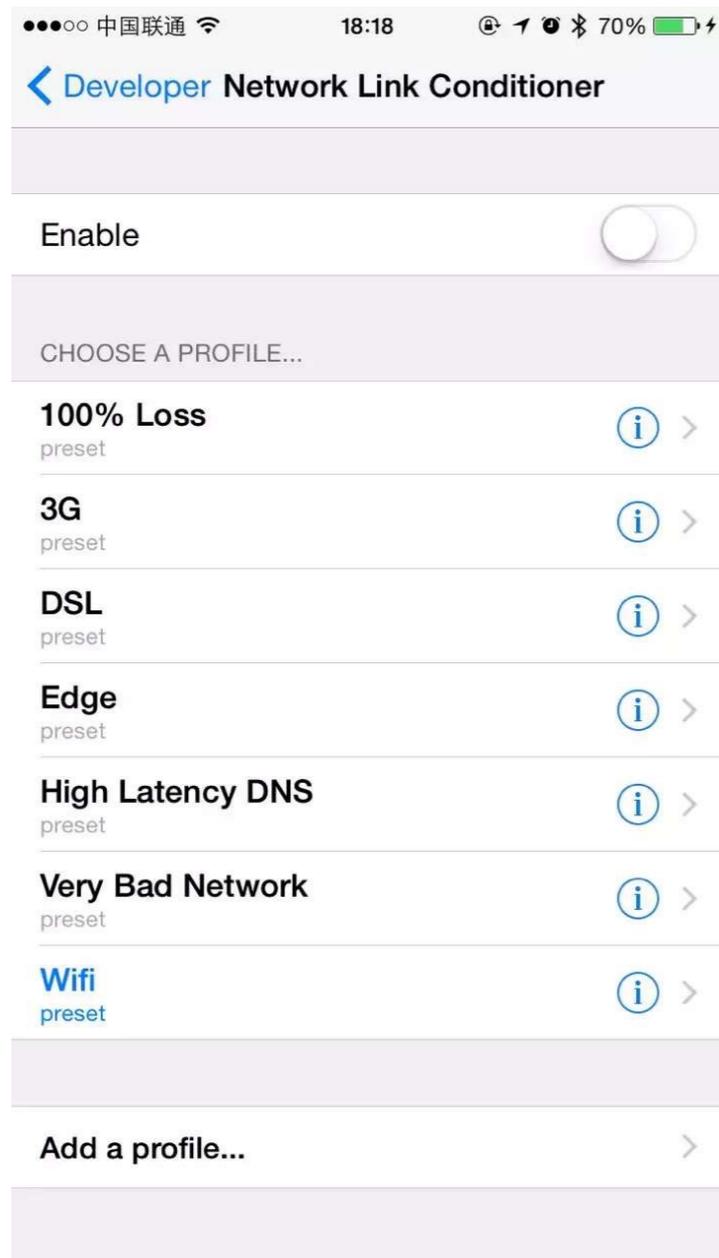
Version	Codename	API	Distribution
2.2	Froyo	8	0.7%
2.3.3 - 2.3.7	Gingerbread	10	11.4%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	9.6%
4.1.x	Jelly Bean	16	25.1%
4.2.x		17	20.7%
4.3		18	8.0%
4.4	KitKat	19	24.5%



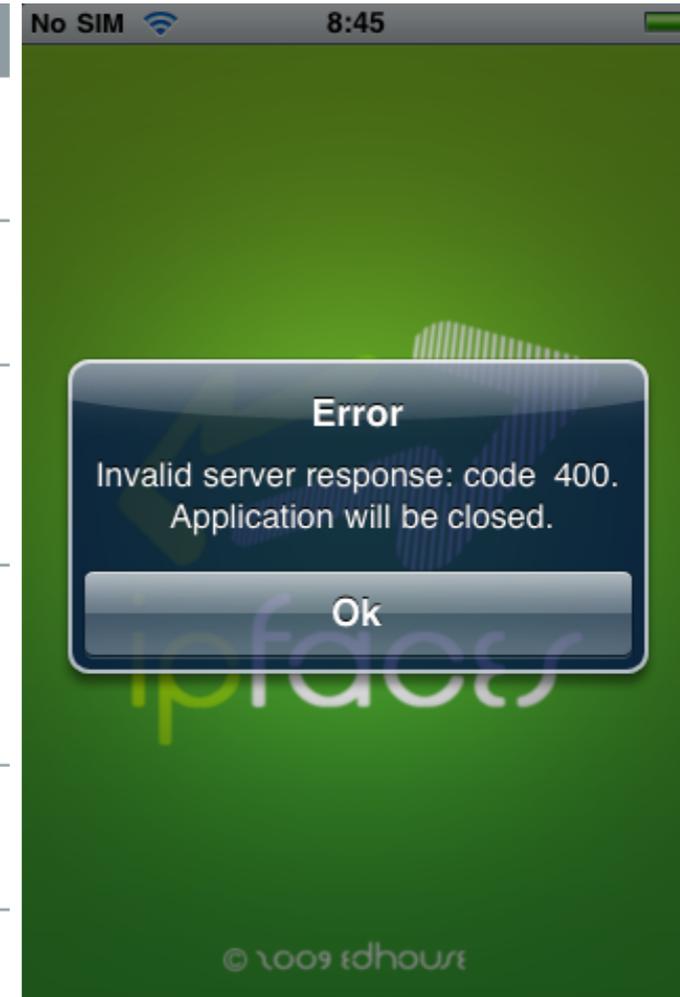
As measured by the App Store on September 21, 2014.

2. 移动网络切换

- 网络切换
- 异常处理的提示
- Network Link Conditioner

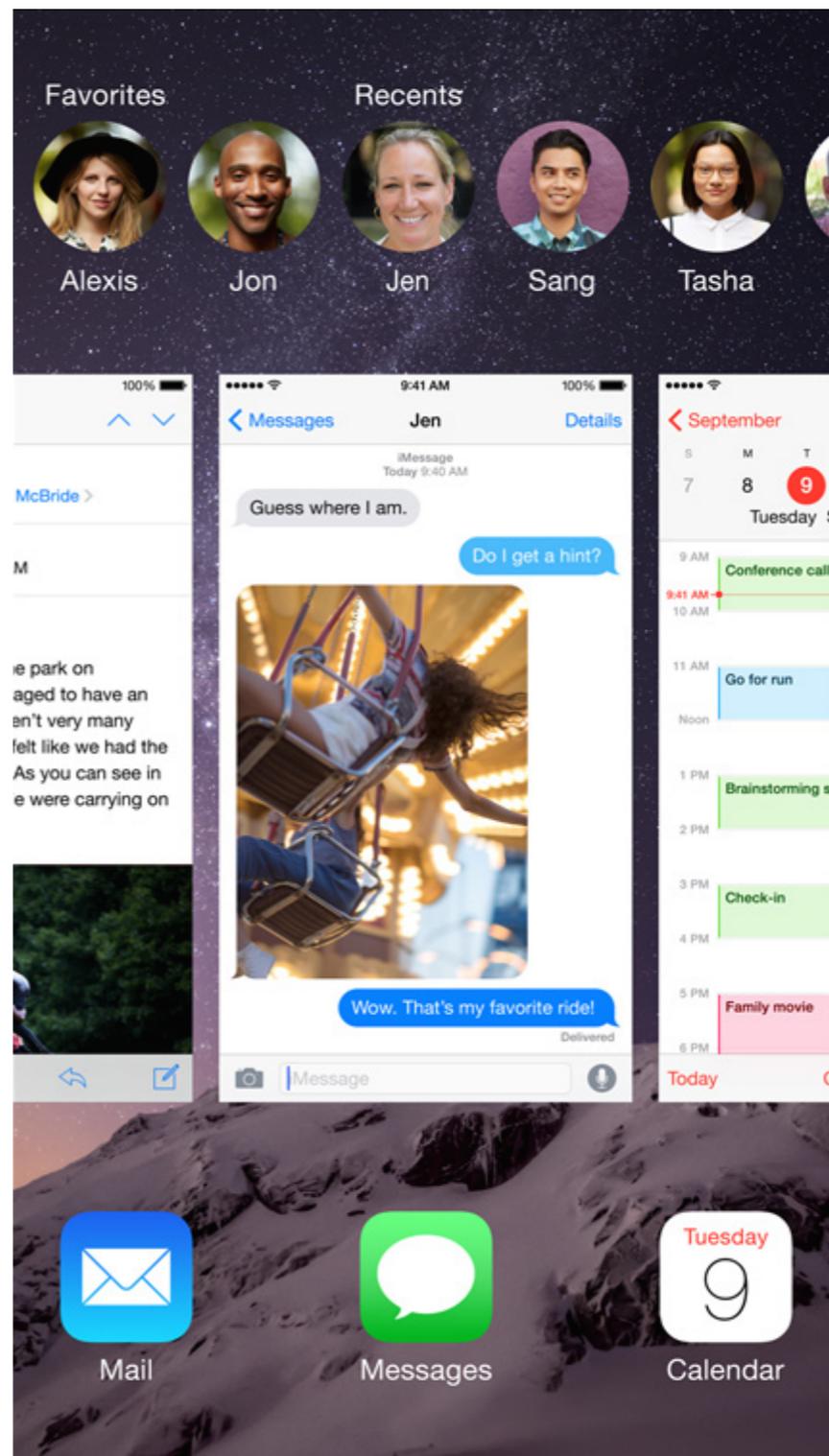


状态图标	
•••••	蜂窝移动网络信号
✈	飞行模式
LTE	LTE
4G	UMTS
3G	UMTS/EV-DO
E	EDGE
GPRS	GPRS/1xRTT
Wi-Fi	无线局域网通话



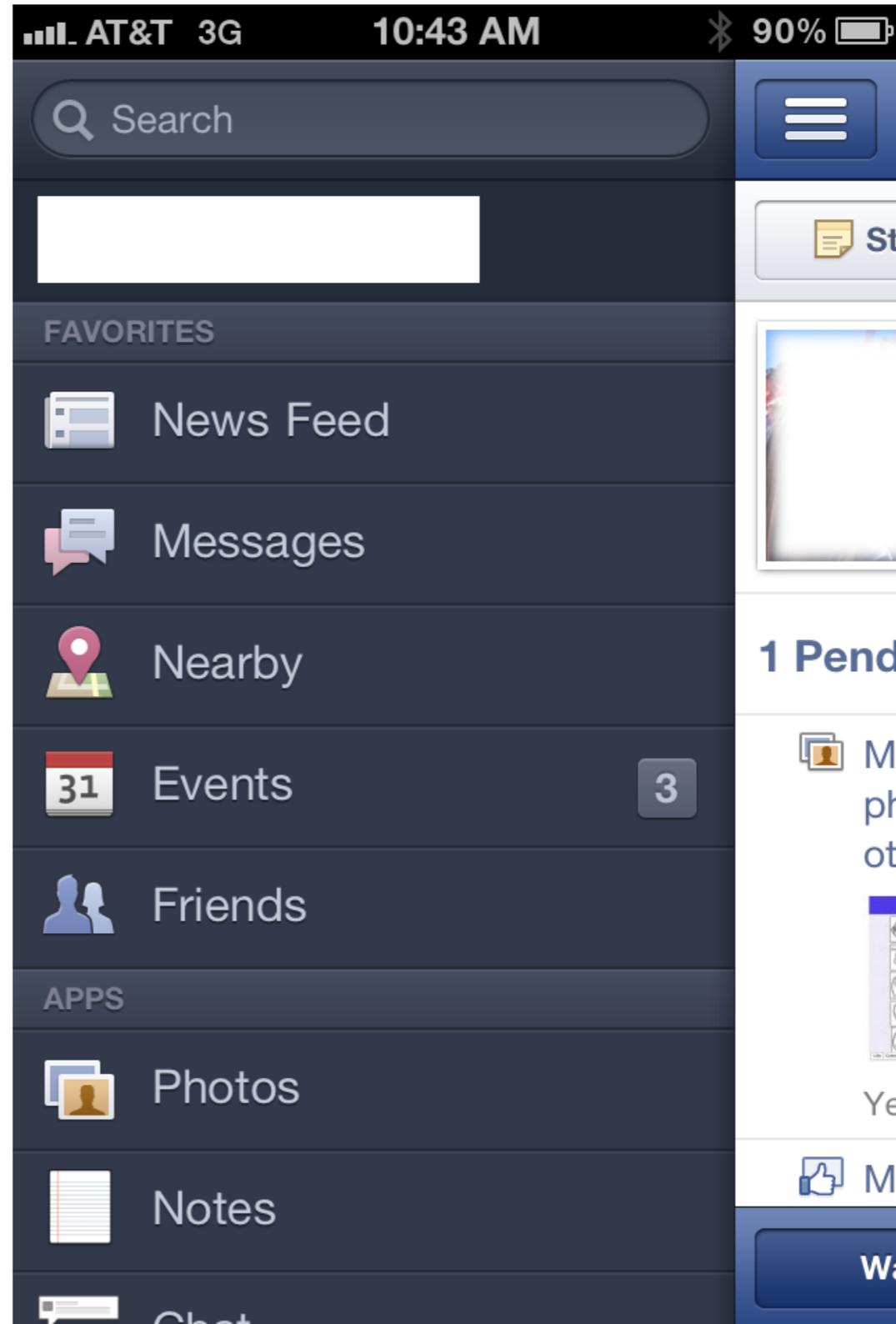
3.多任务处理

- App切换处理
- 恢复
- 流畅度



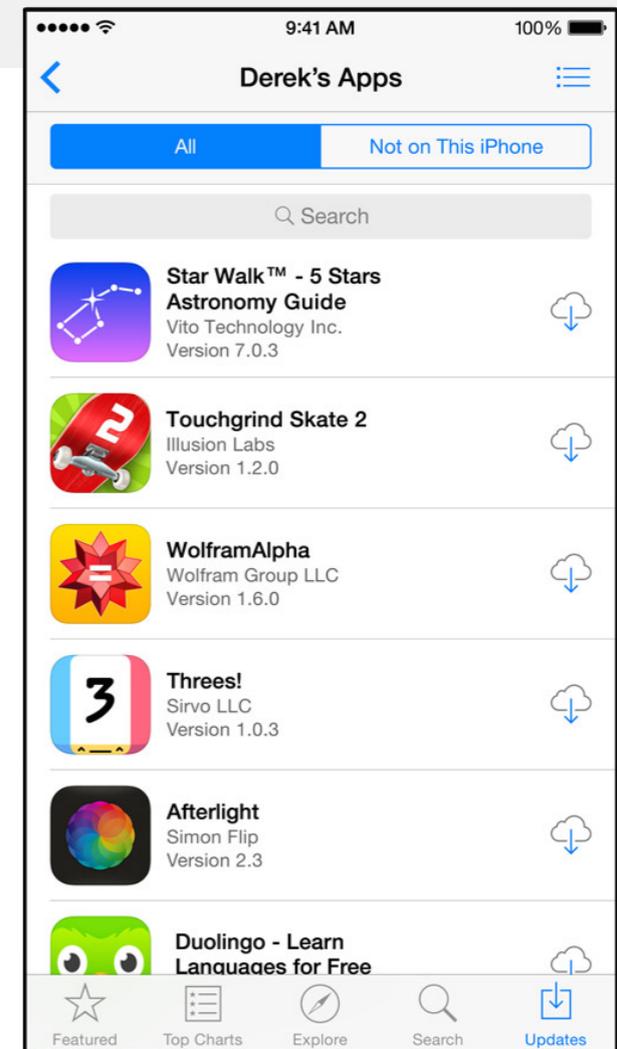
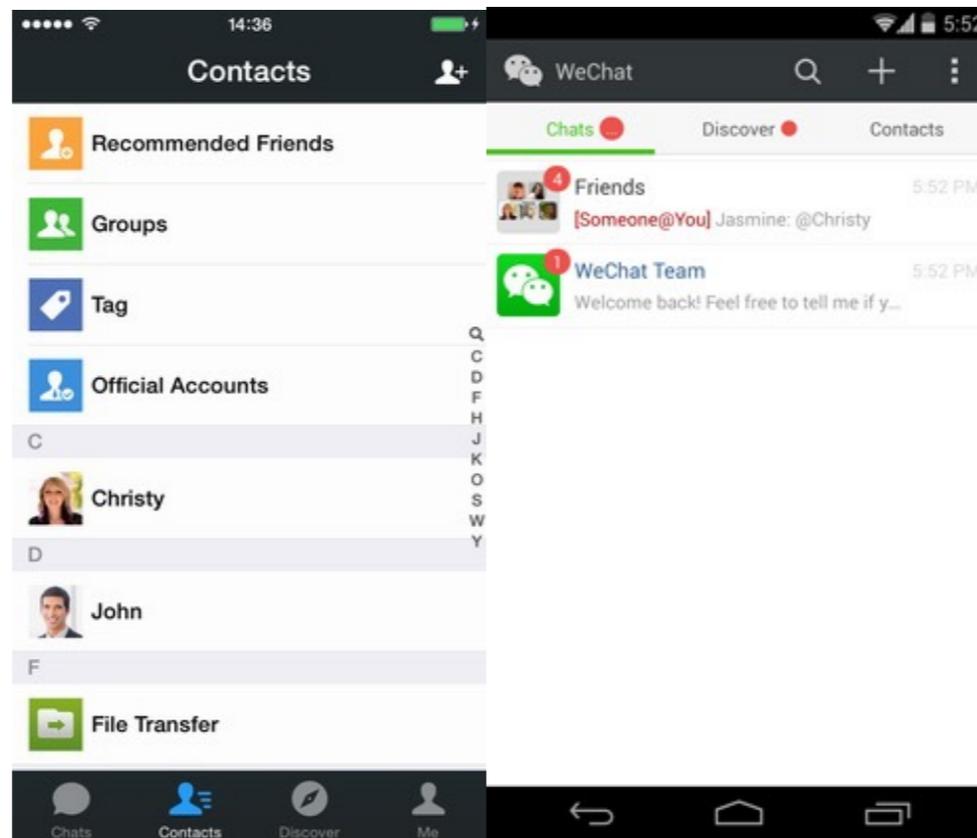
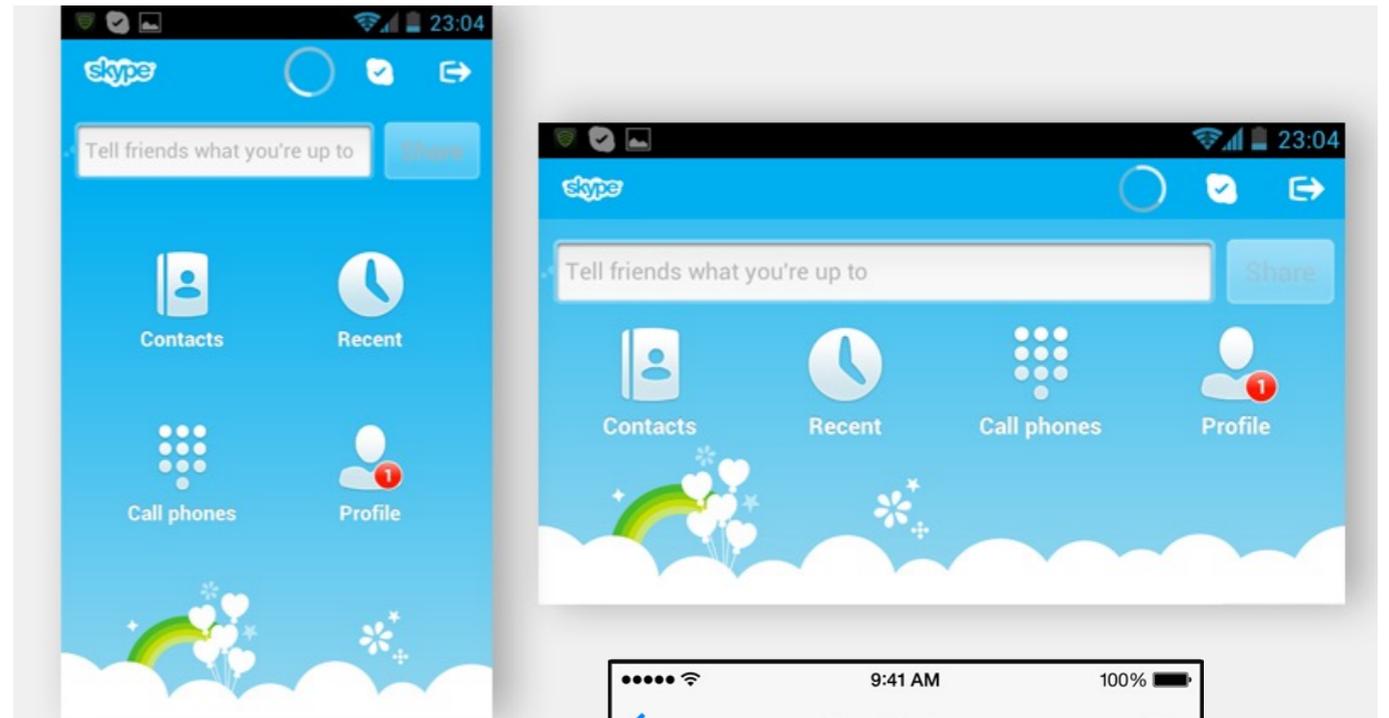
4.手势操作

- 应用手势
- 操作系统手势



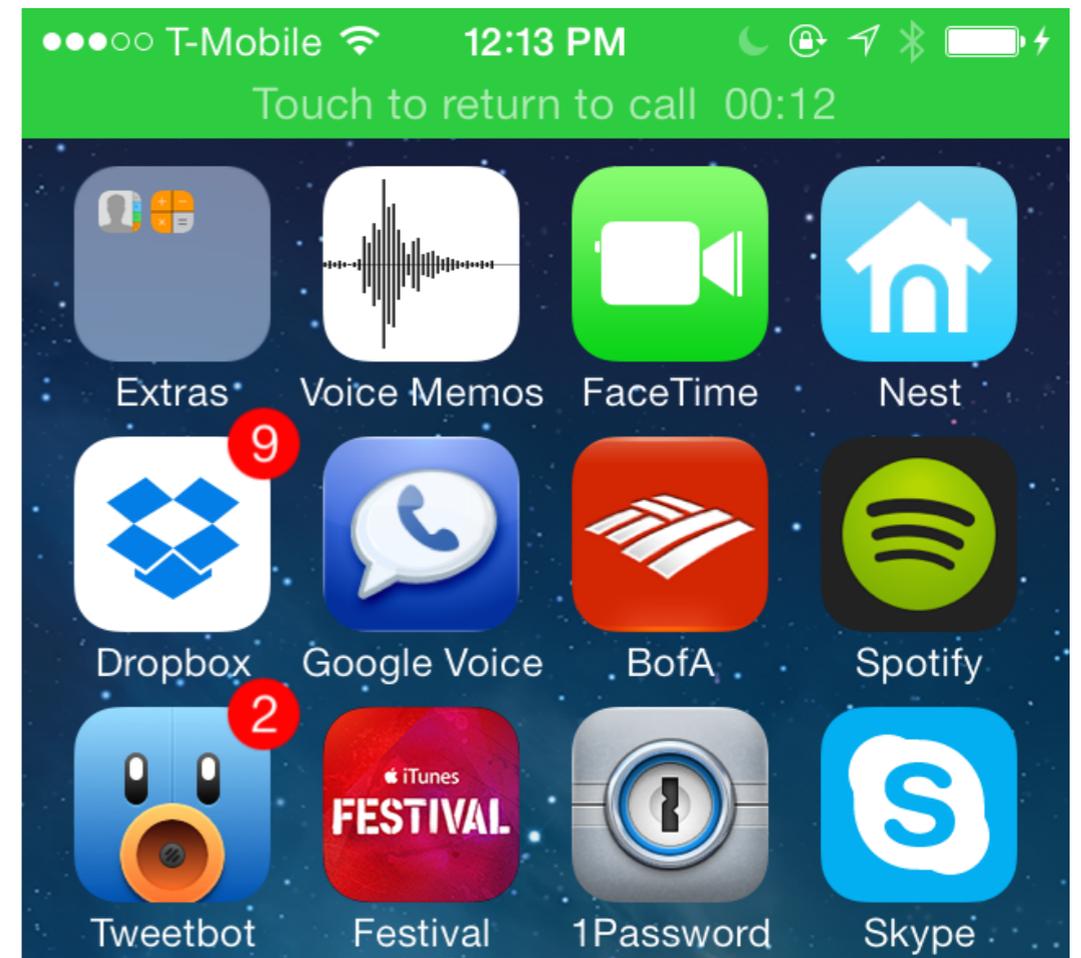
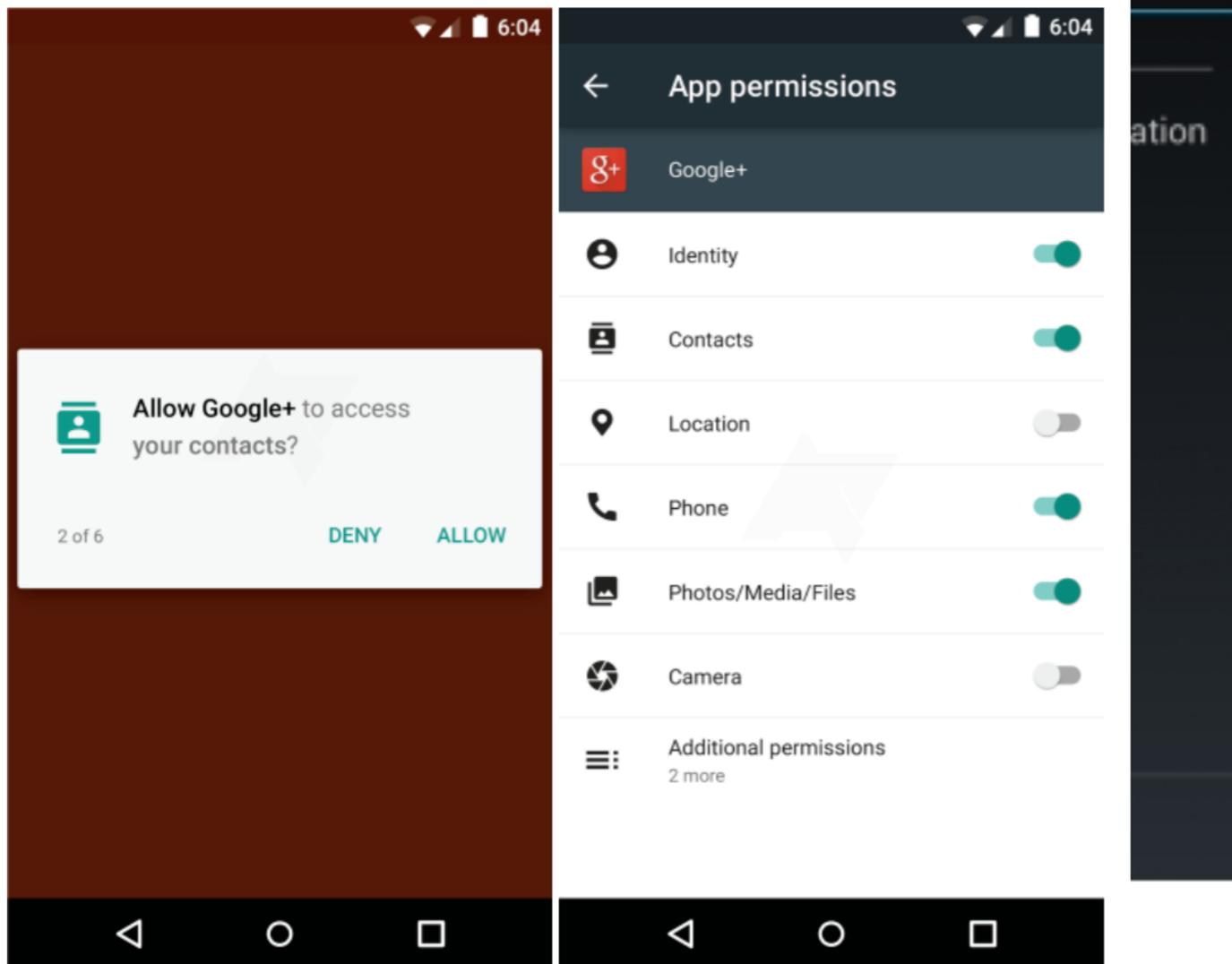
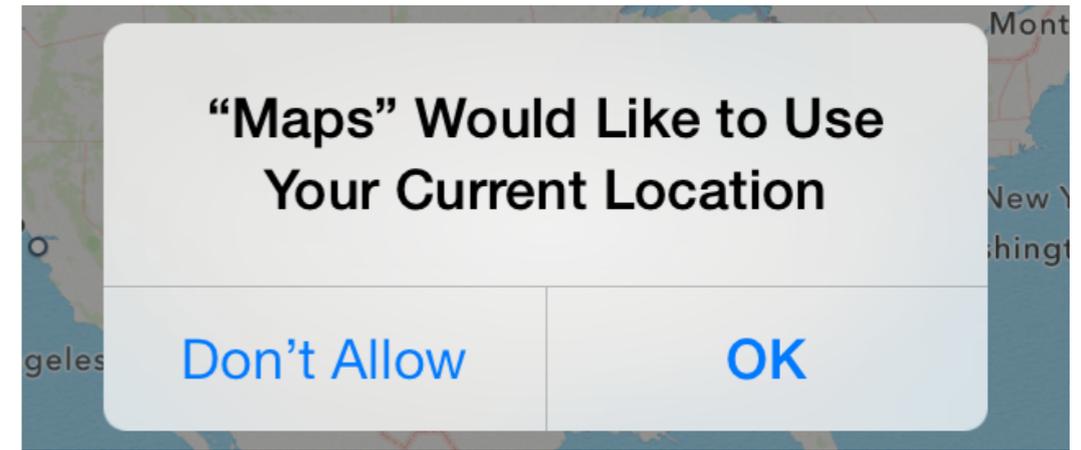
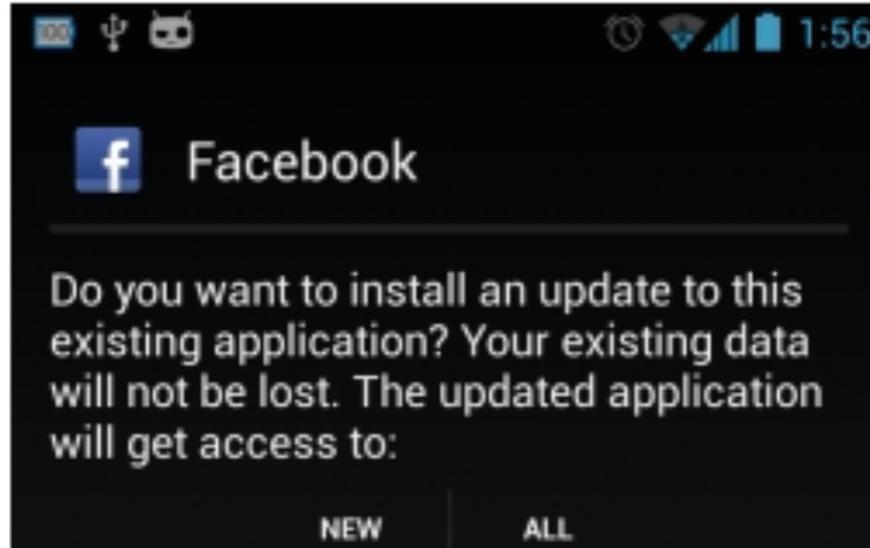
5. 用户体验

- 横竖屏
- 辅助功能Accessibility
- 一致性
- WebView



6.通知和消息

- 权限
- 传感器
- 通知栏
- 消息推送



7.操作系统特性

- **Android**

- Widget
- Dalvik和ART

- **iOS**

- Widget
- SlideOver
- SplitView
- Picture in Picture
- App在系统中的设置



8.不同设备信息同步

- 一处改变
- 多处同步



9.特定设备

- 三星的TouchWiz
- HTC的Sense
- LG的UX
- 魅族的FlyMe
- 小米的MIUI



10.多文件格式支持

- PDF
- Office: Word, Excel, PowerPoint
- 图片
- 视频



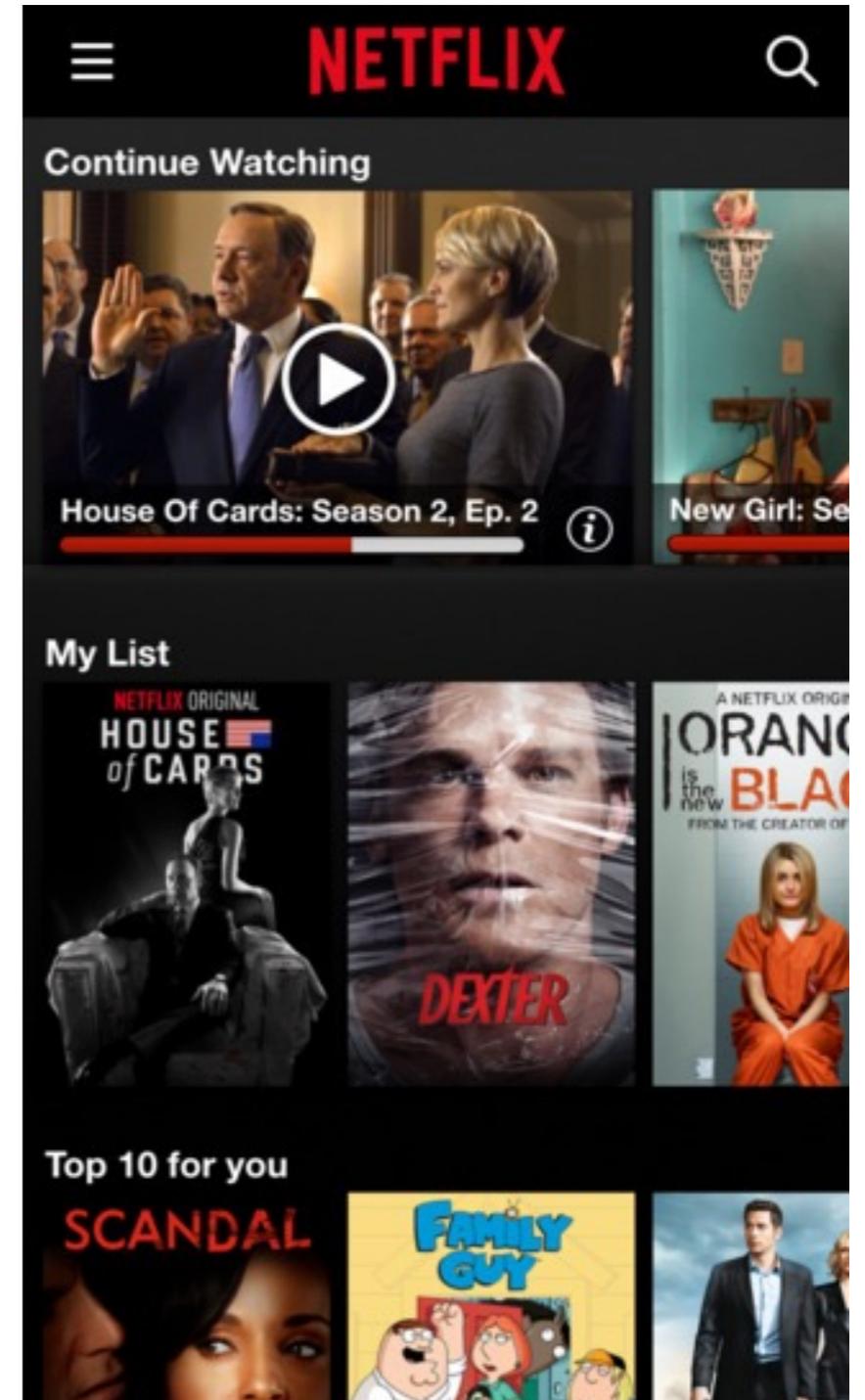
11.国家和地区支持

- 文字显示
- 时间和日期格式
- 输入法



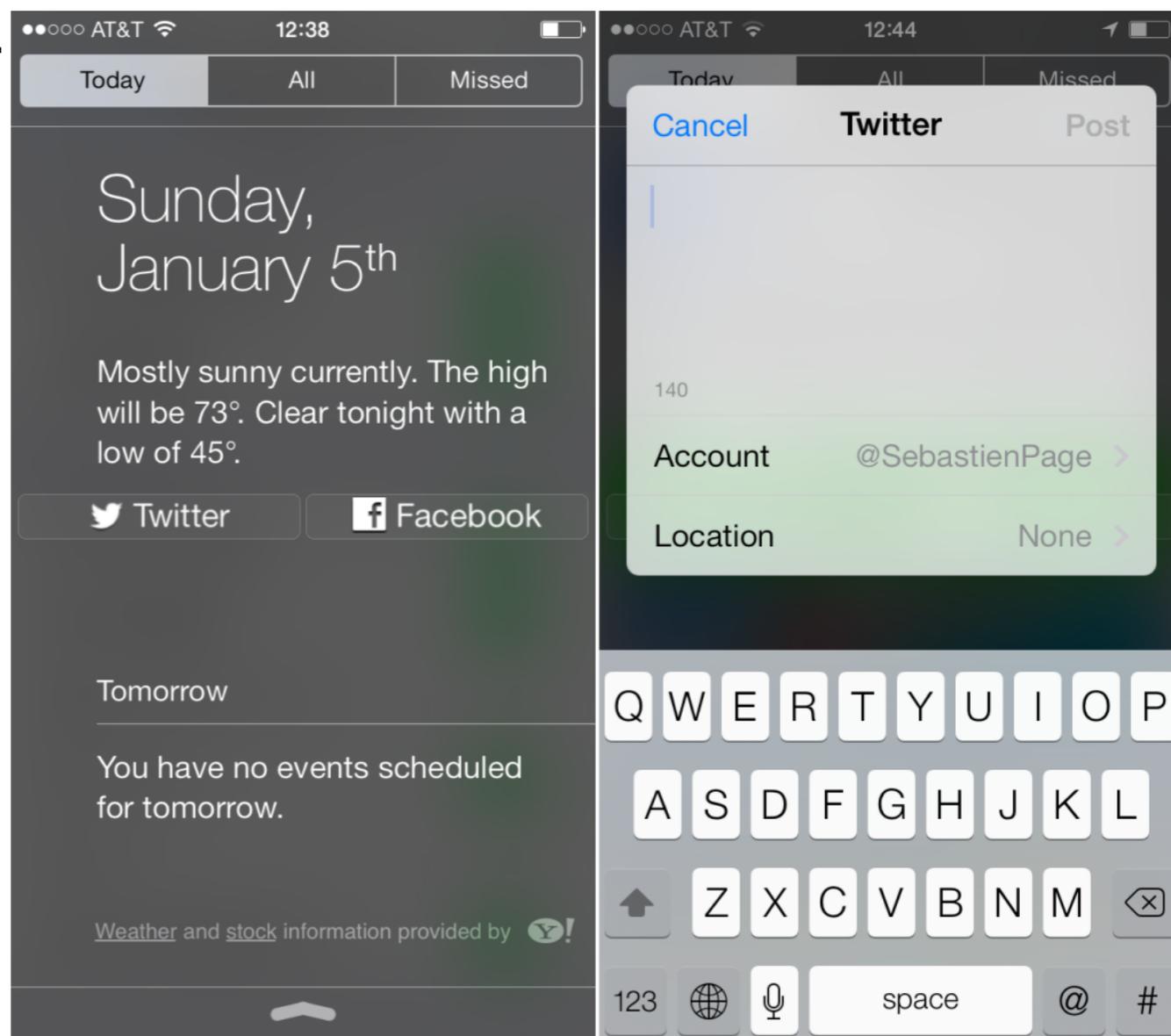
12.高内存占用

- 操作系统本身对于app内存的限制
- 大量图片
- 长时间语音
- 大容量视频



13.非标准控件

- 操作系统本身提供的控件
- 第三方类库的控件
- App中独立实现的控件

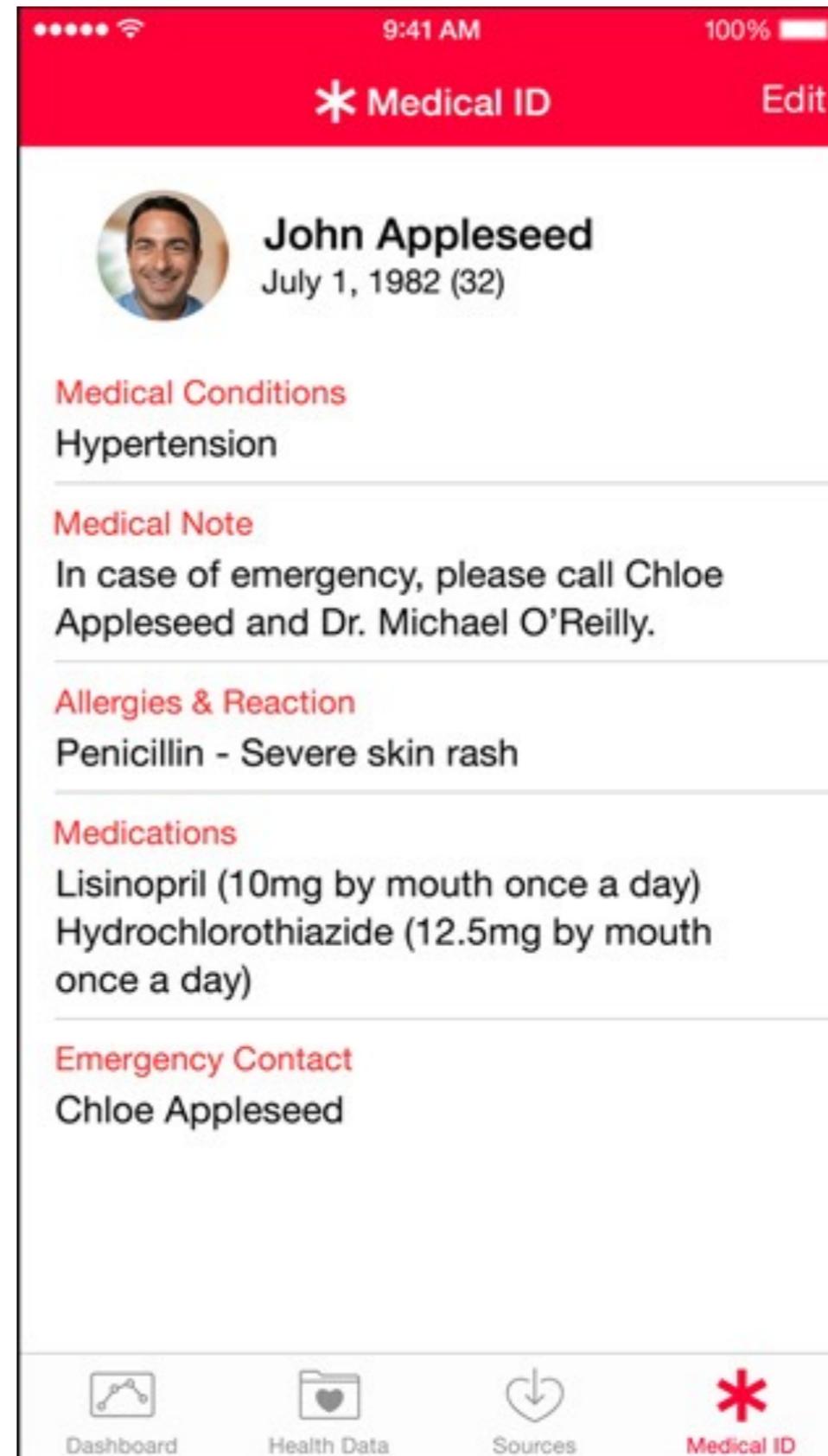


在app中实现主题颜色的切换



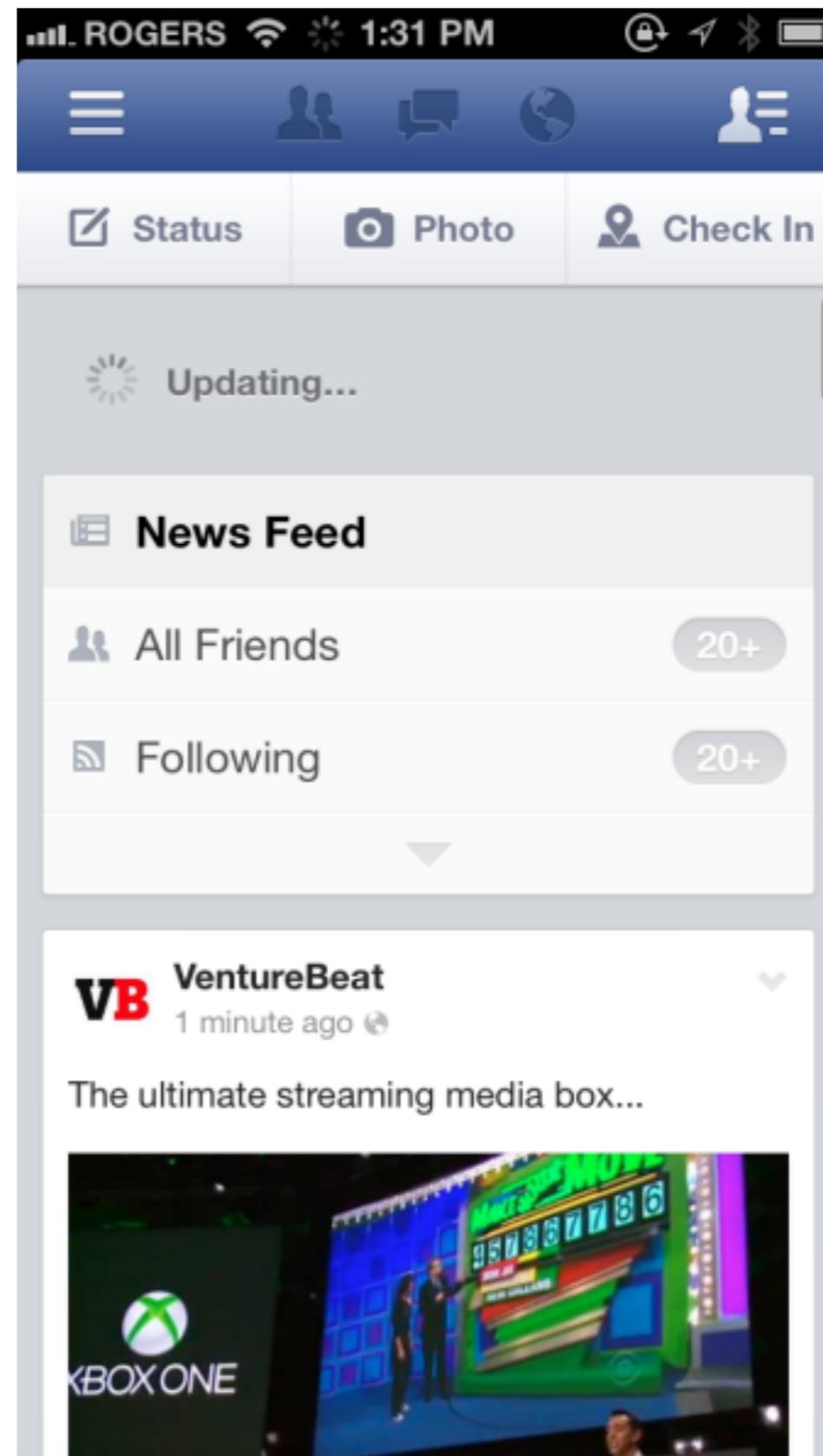
14.APP升级管理

- 覆盖/增量安装
- 用户信息
- 数据库变化
- 删除App



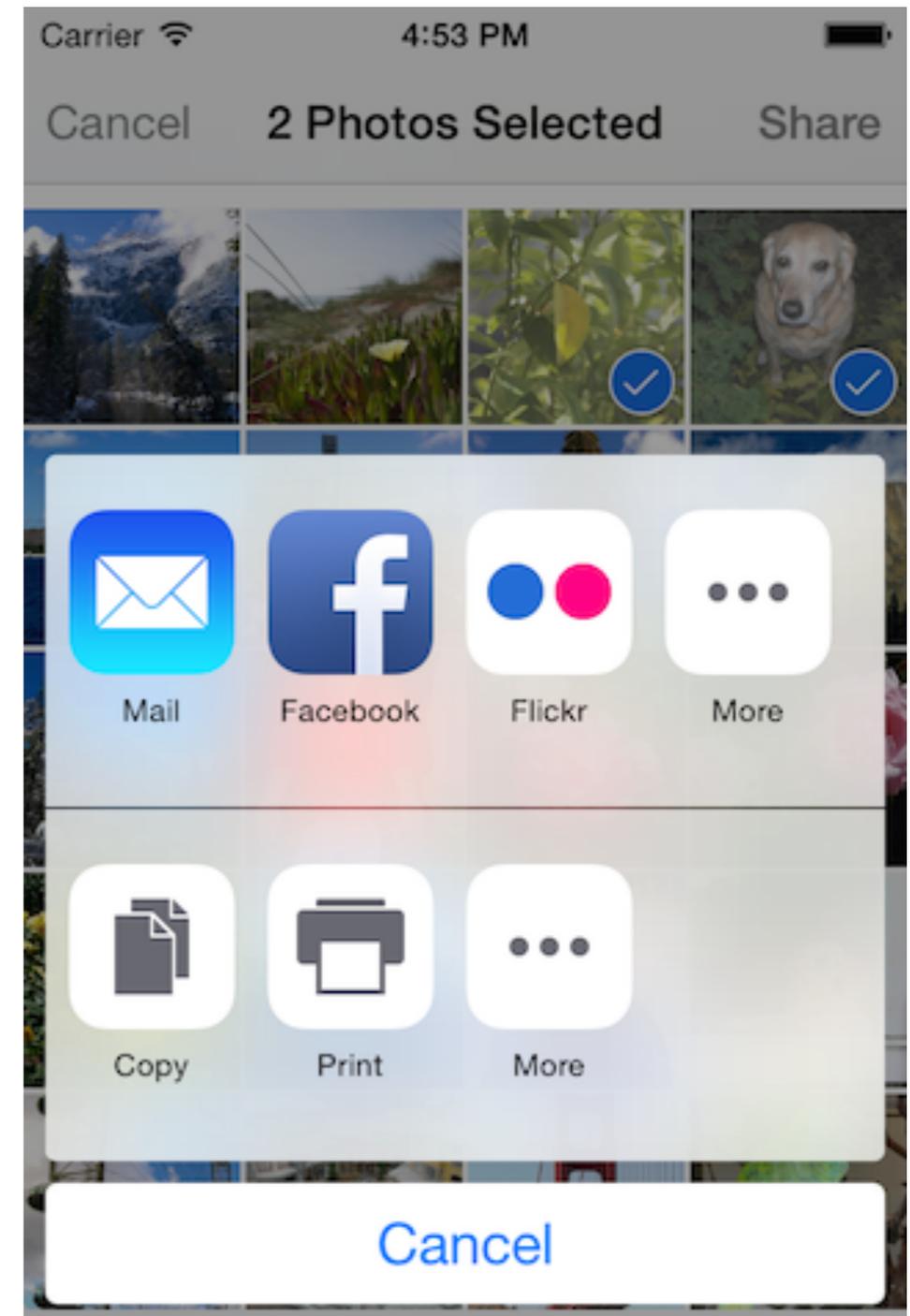
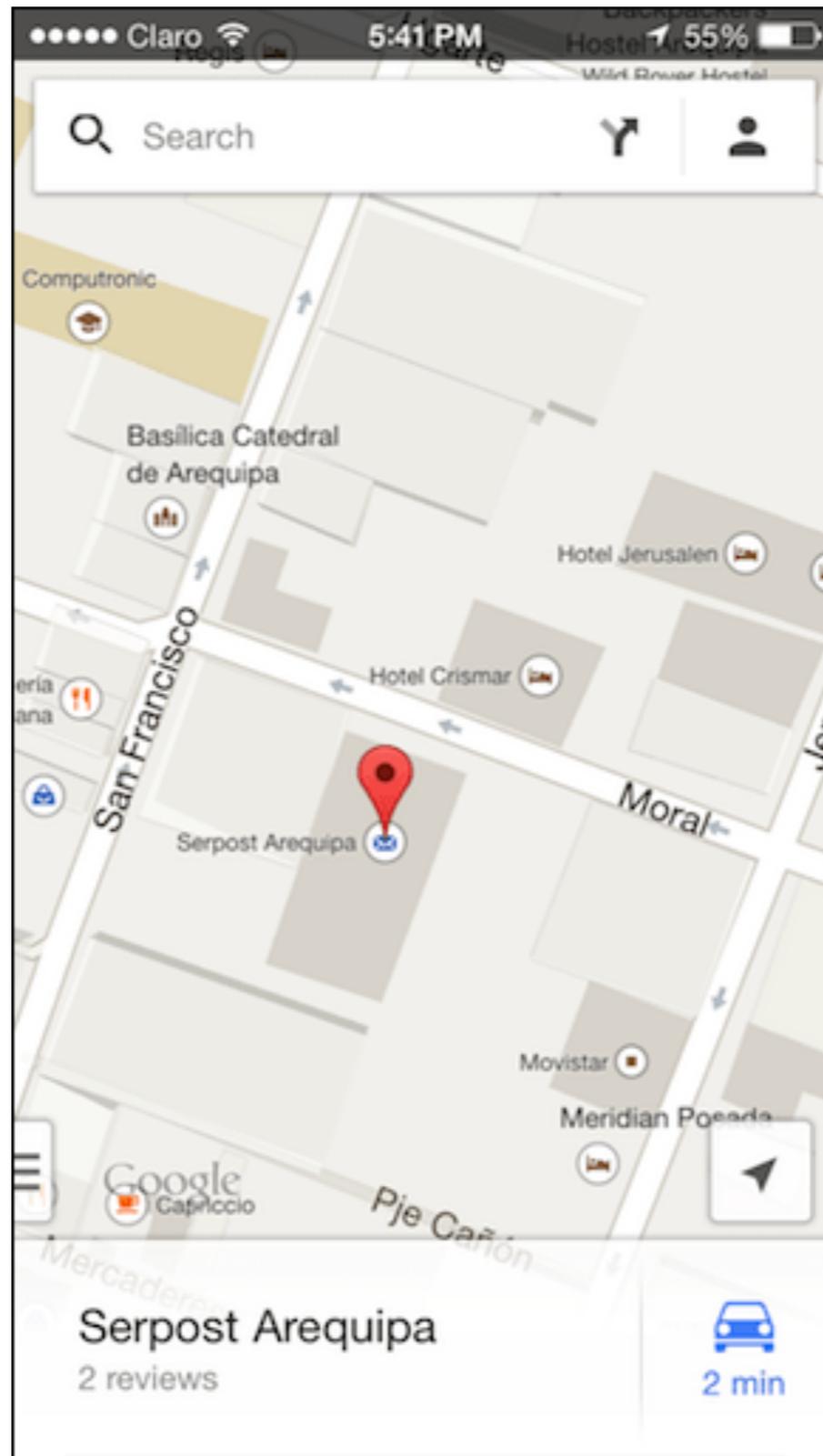
15.APP缓存机制

- 更新频率
- 更新显示



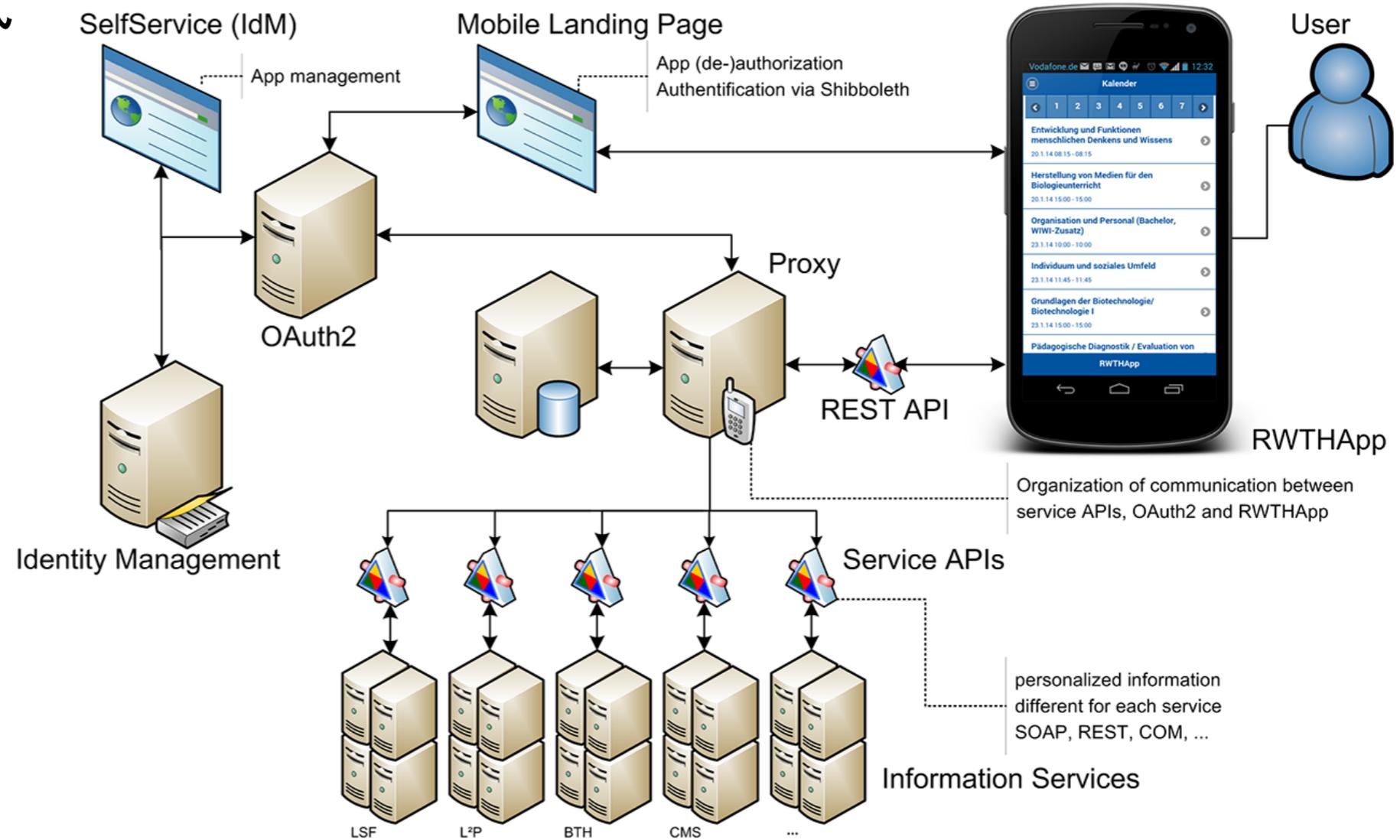
16. 第三方APP集成和调用

- app集成
- app调用



17.APP依赖

- 第三方系统/app
- Webservice
- API和集成测试



18. 自动化测试和探索式测试

- 自动化测试
 - 单元测试
 - WebService的自动化测试
 - 模拟器
 - 用户旅程的自动化测试



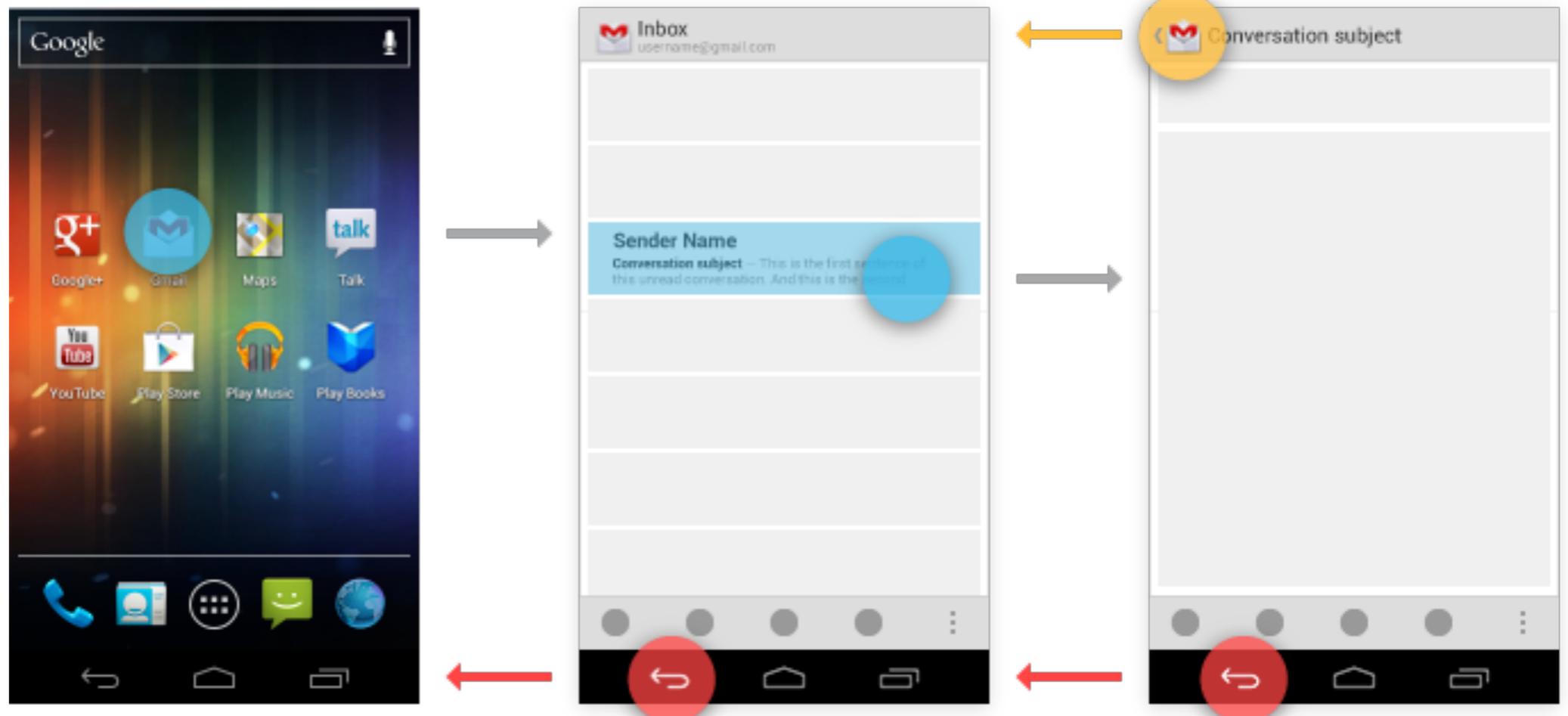
Robotium



18. 自动化测试和探索式测试

● 探索式测试

- 实际设备
- 页面跳转
- 数据流动
- 涉及多页面的流程操作



19.安全测试

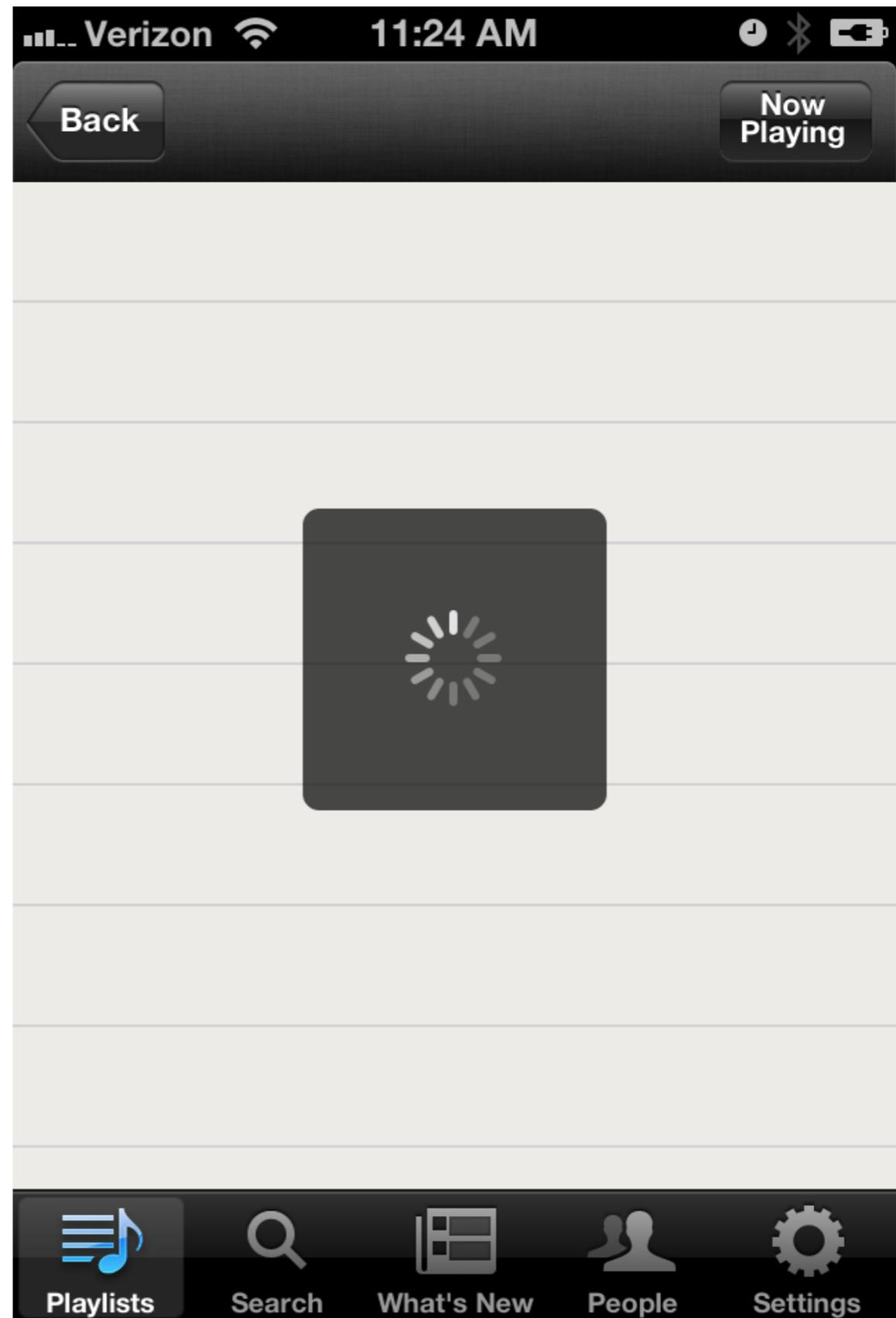
- Webservice
- iPhone Configuration Utility
- Android Developer Tools: DDMS
- SQLite数据库
- App请求中用户信息



```
C:\Users\nbise\Downloads\adt-bundle-x86_64\adt-bundle-x86_64\sdk\platform-tools>
adb -s emulator-5554 shell
root@generic:/ # sqlite3 /data/data/com.example.caronline/databases/app
sqlite3 /data/data/com.example.caronline/databases/app
SQLite version 3.7.11 2012-03-20 11:35:50
Enter ".help" for instructions
Enter SQL statements terminated with a ";"
sqlite>
```

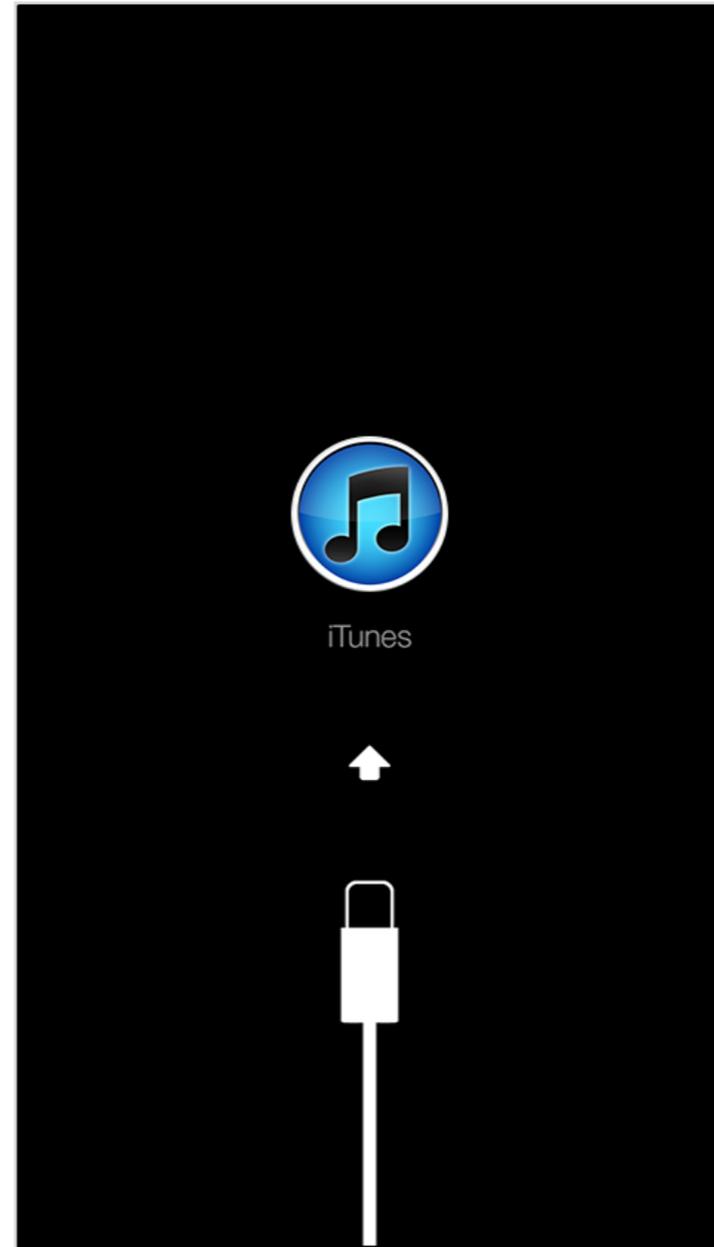
20.性能测试

- 网络连接速度
- 操作流畅度
- Webservice性能
- SQLite数据库的性能



21.操作系统升级

- 新的操作系统的特性和规范
- 当前系统的回归测试
- 新系统的适应性测试



22.持续集成和持续部署

- 稳定性问题
- iOS: TestFlight
- Android: Dropbox



TestFlight
iOS Beta Testing On The Fly



Dropbox



移动APP测试的22条军规

移动App测试的22条军规

移动App测试的 22条军规

Pro Mobile App Testing With
22 Rules

黄勇 著

- 全面讲解了移动App测试必知必会的技术、工具和测试用例
- 通过22条来自于测试实战中的最佳实践，展示了移动App测试中心思想
- 移动App测试中的测试方法和案例实践，以及提高效率的技术和技巧
- 图文并茂，帮助读者更快速掌握移动App测试全流程

人民邮电出版社

中国工信出版集团

人民邮电出版社
POSTS & TELECOM PRESS

Q & A