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# 移动APP测试的22条军规

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# 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)<br>the average is 4.9 oz (139 g) |  4.55 oz (129 g)<br>the average is 4.9 oz (139 g) |  4.59 oz (130 g)<br>the average is 4.9 oz (139 g)     |
| Body material |  | Aluminium  |  |
| Rugged        | Water, Dust resistant  |  |  |
| IP certified  | IP 67  |  |  |

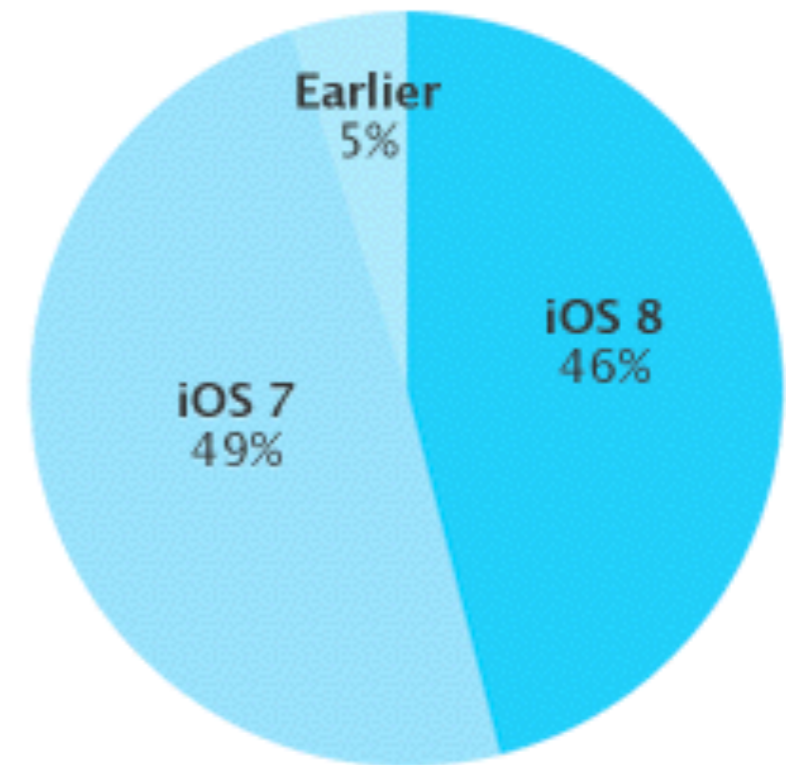
## DISPLAY

|               |  |   |  |
|---------------|--|---|--|
| 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            |

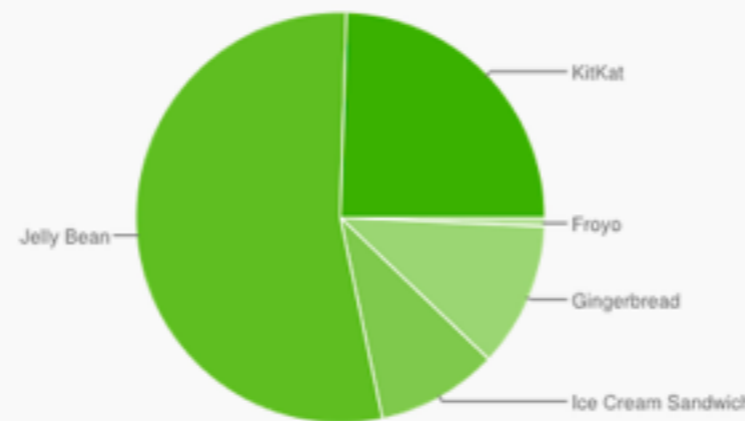
# 1.设备和平台

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

46% of devices are using iOS 8.



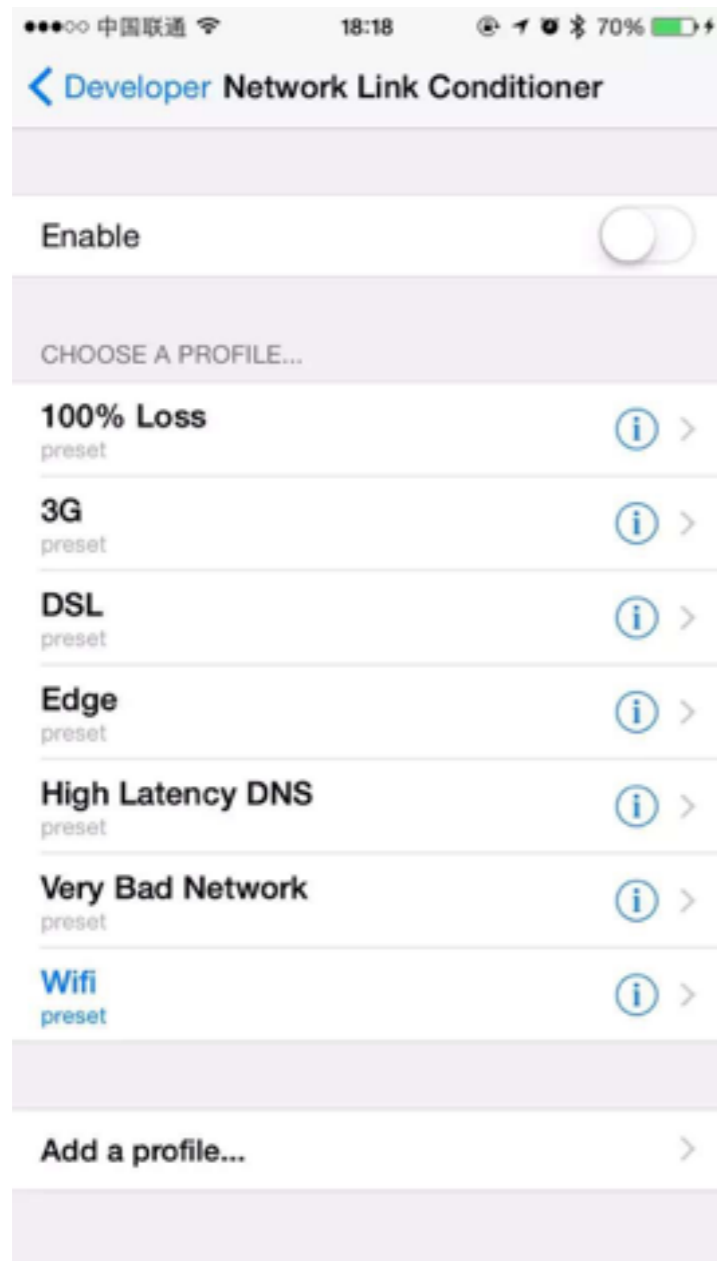
| Version       | Codename           | API | Distribution |
|---------------|--------------------|-----|--------------|
| 2.2           | Froyo              | 8   | 0.7%         |
| 2.3.3 - 2.3.7 | Gingerbread        | 10  | 11.4%        |
| 4.0.3 - 4.0.4 | Ice Cream Sandwich | 15  | 9.6%         |
| 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%        |



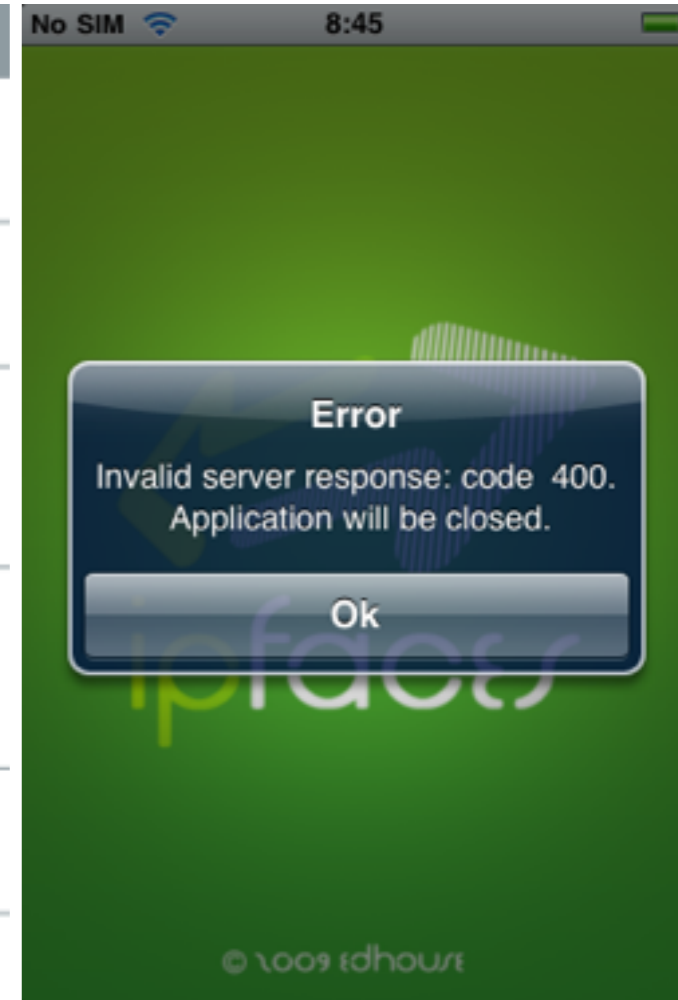
As measured by the App Store on September 21, 2014.

## 2.移动网络切换

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

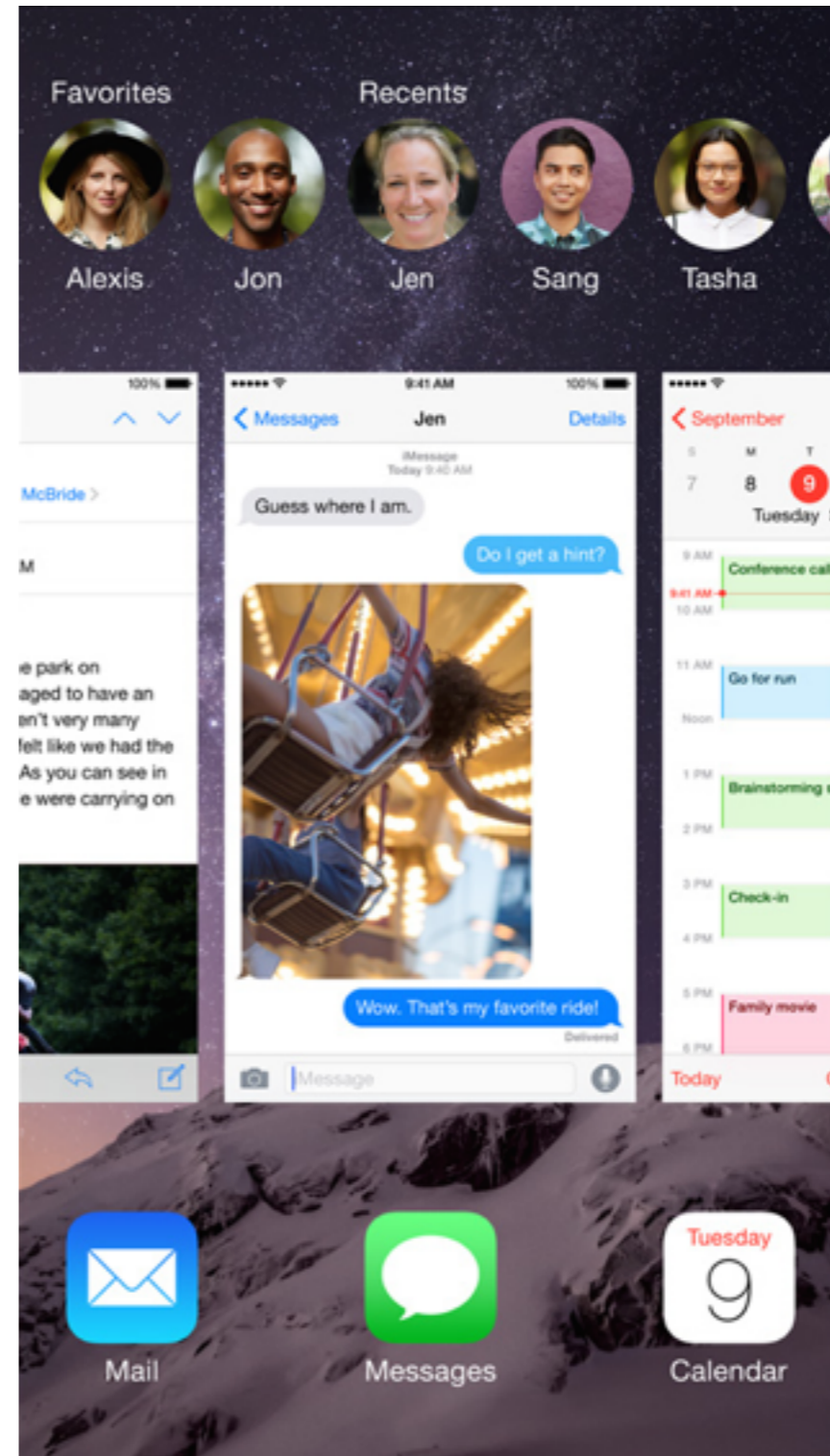


| 状态图标  |            |
|-------|------------|
| ..... | 蜂窝移动网络信号   |
| ✈️    | 飞行模式       |
| LTE   | LTE        |
| 4G    | UMTS       |
| 3G    | UMTS/EV-DO |
| E     | EDGE       |
| GPRS  | GPRS/1xRTT |
| Wi-Fi | 无线局域网通话    |



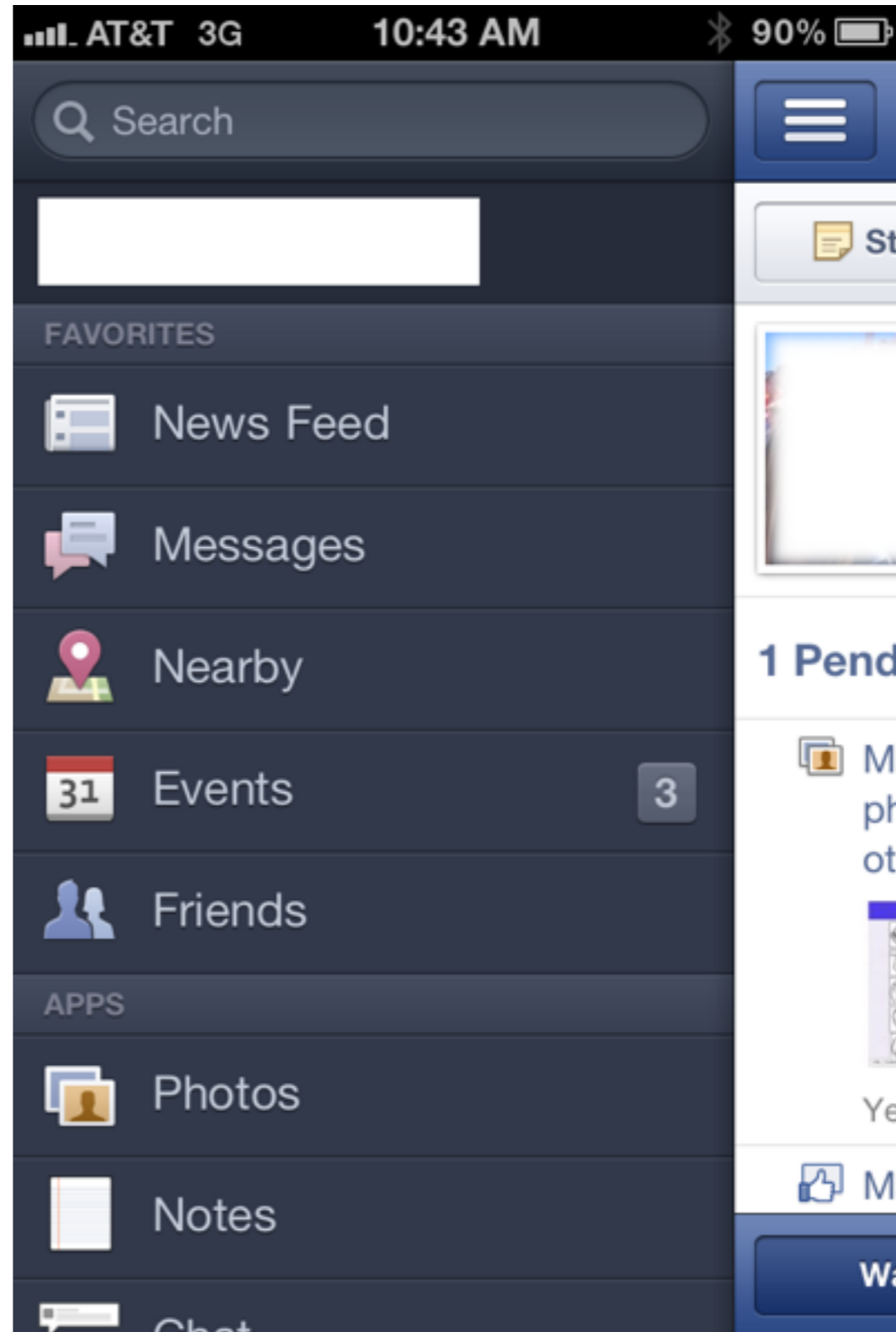
## 3.多任务处理

- App切换处理
- 恢复
- 流畅度



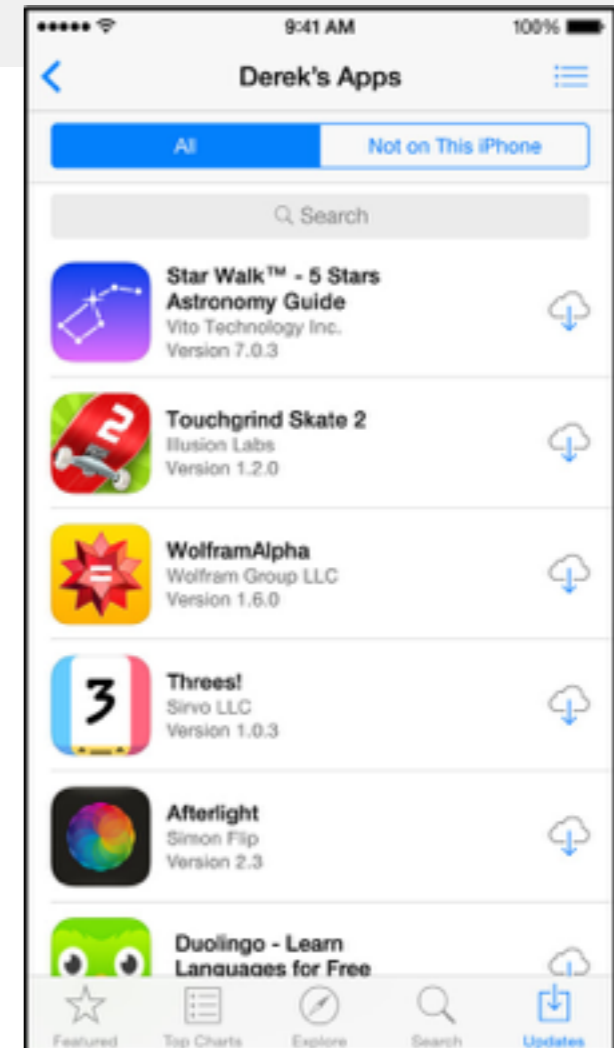
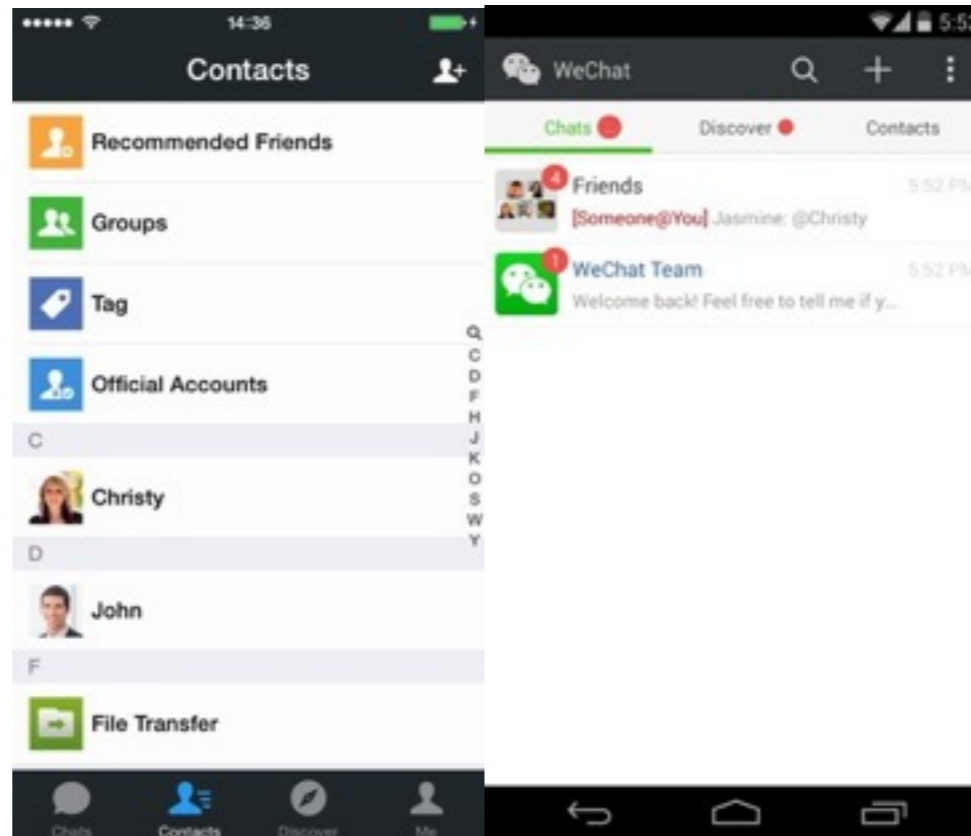
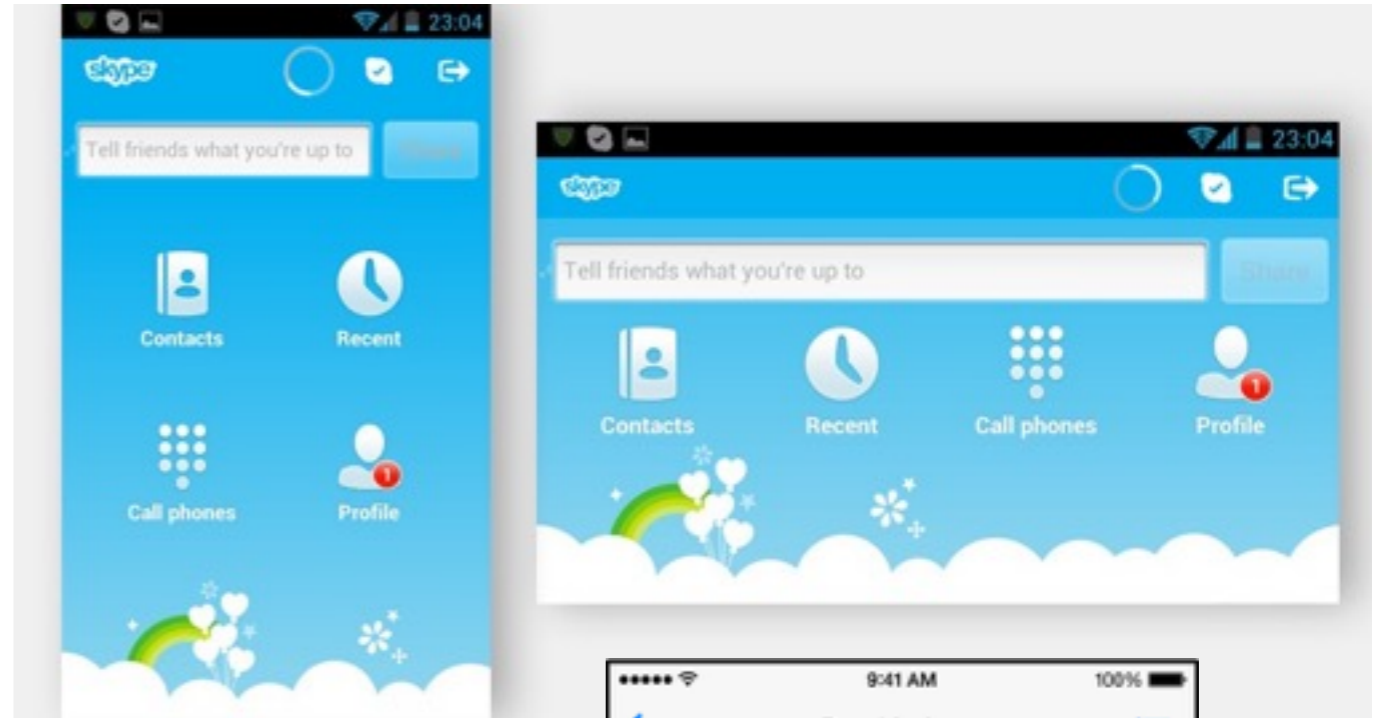
## 4.手势操作

- 应用手势
- 操作系统手势



# 5. 用户体验

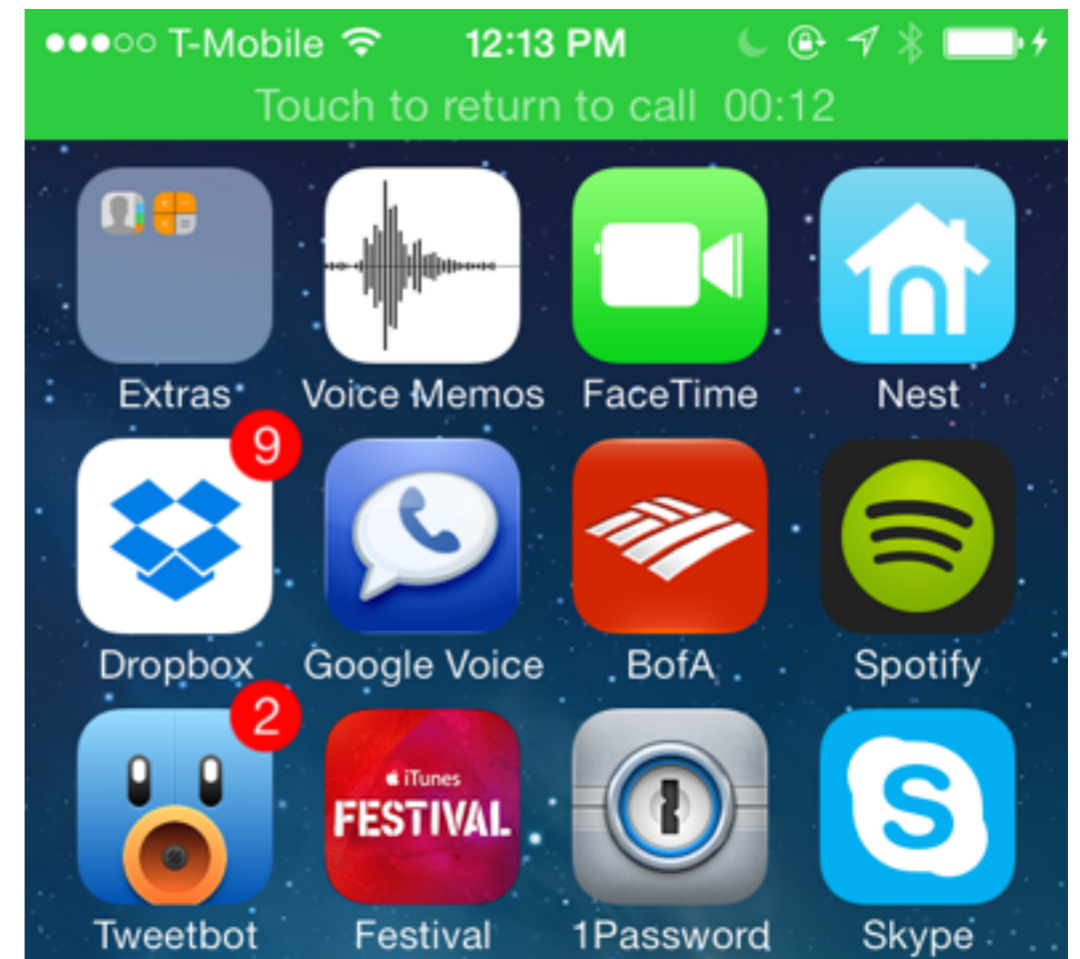
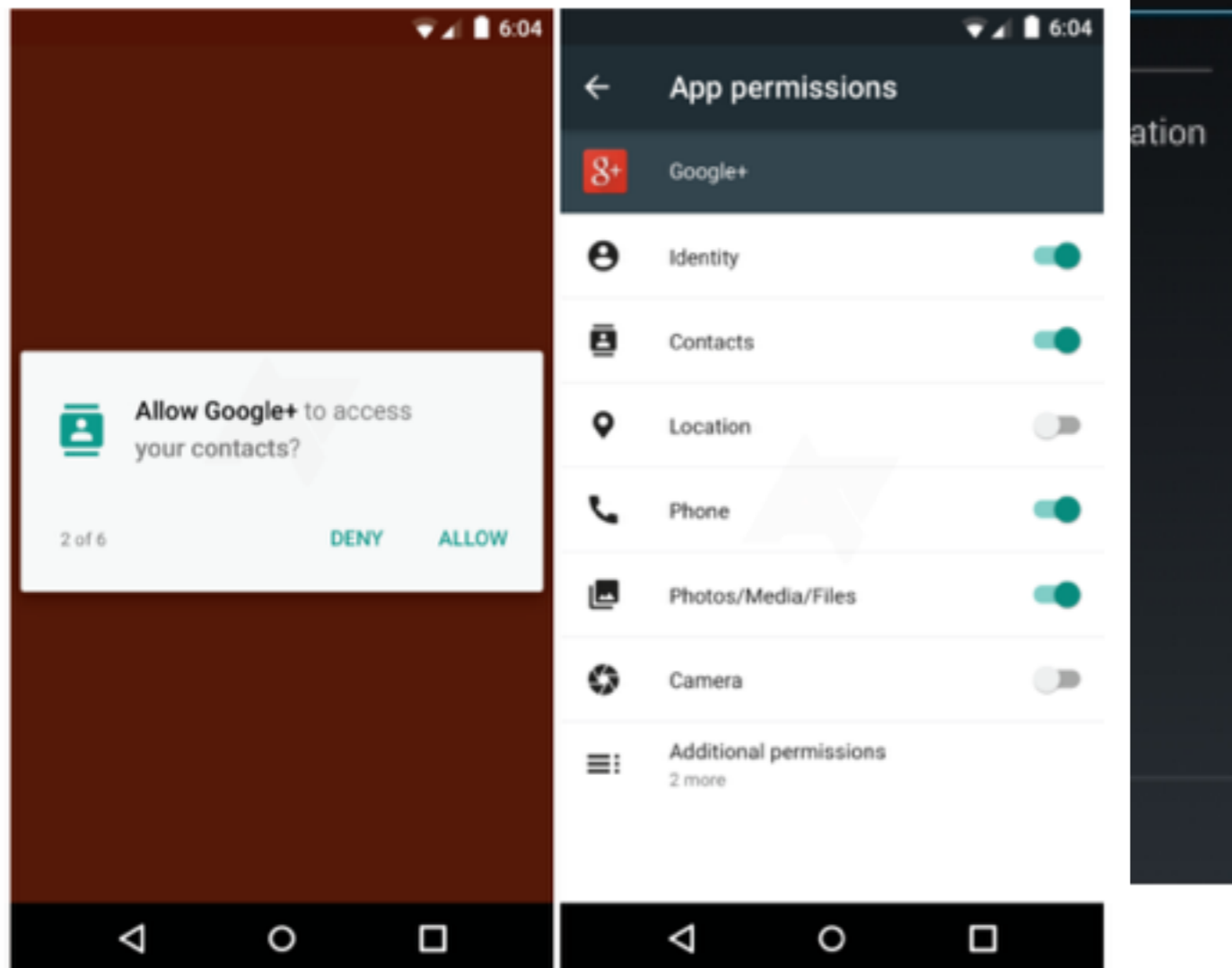
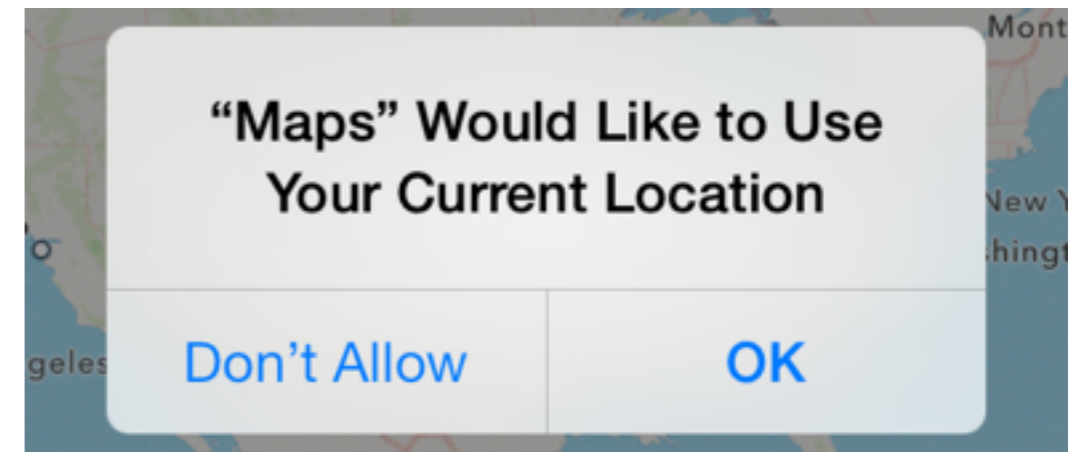
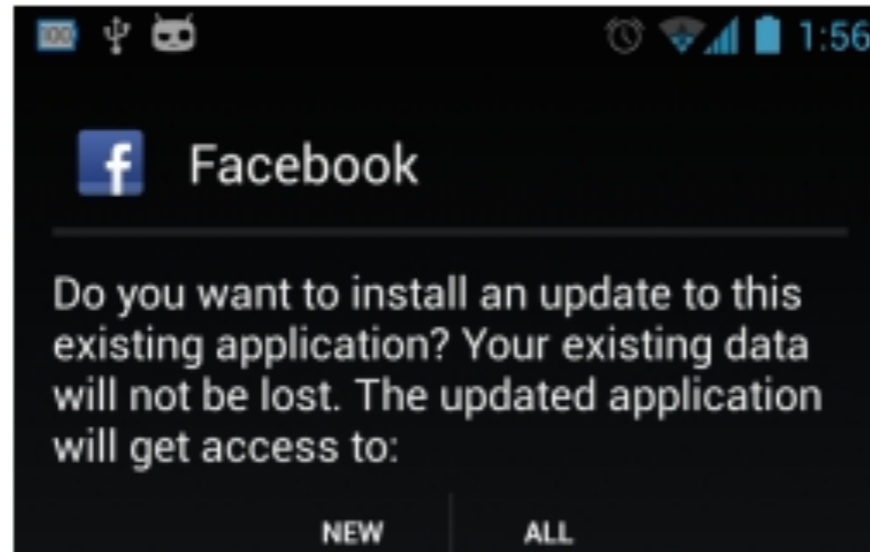
- 横竖屏
- 辅助功能Accessibility
- 一致性
- WebView





## 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

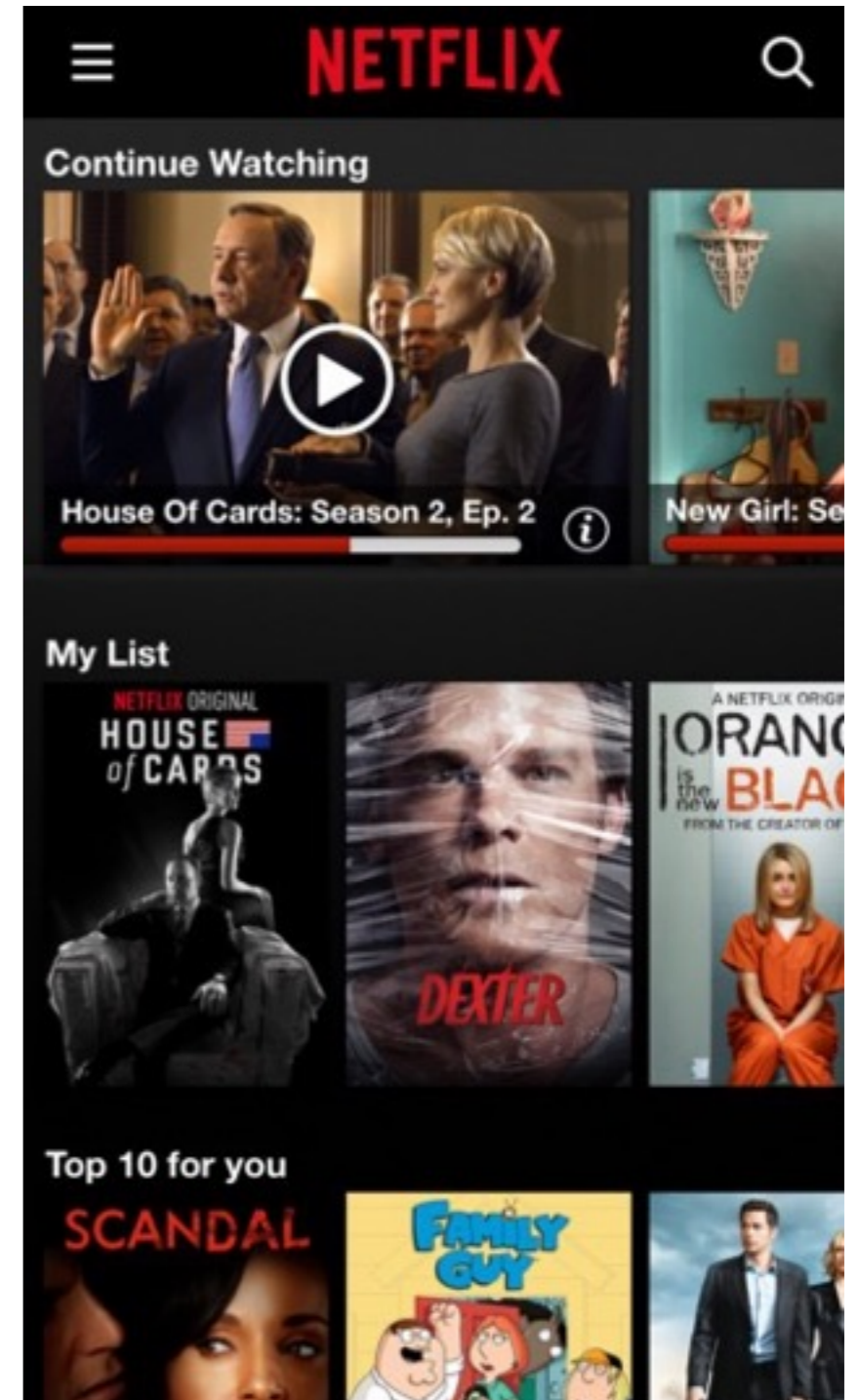
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- 文字显示
- 时间和日期格式
- 输入法



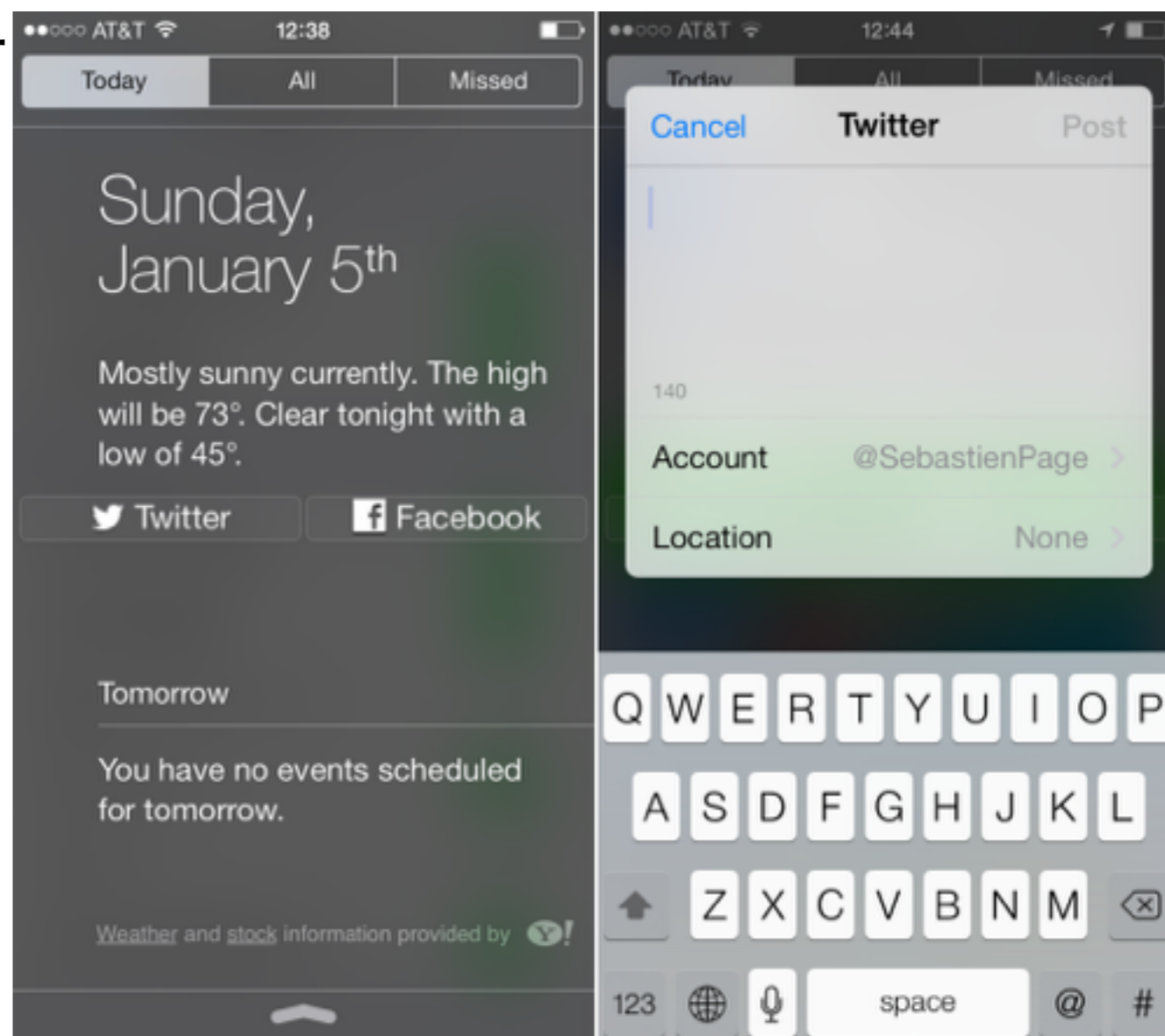
## 12.高内存占用

- 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



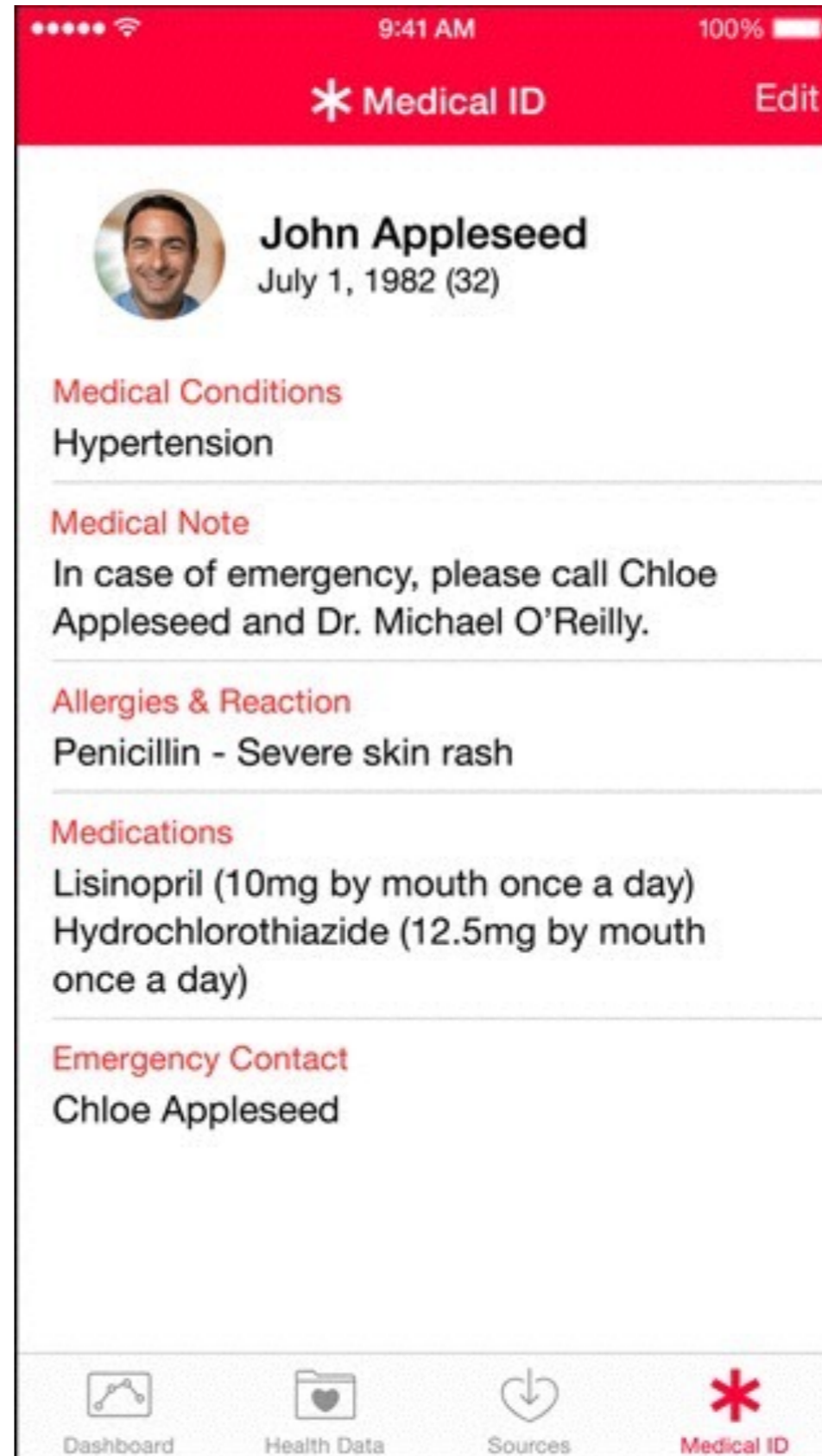
在app中实现主题颜色的切换





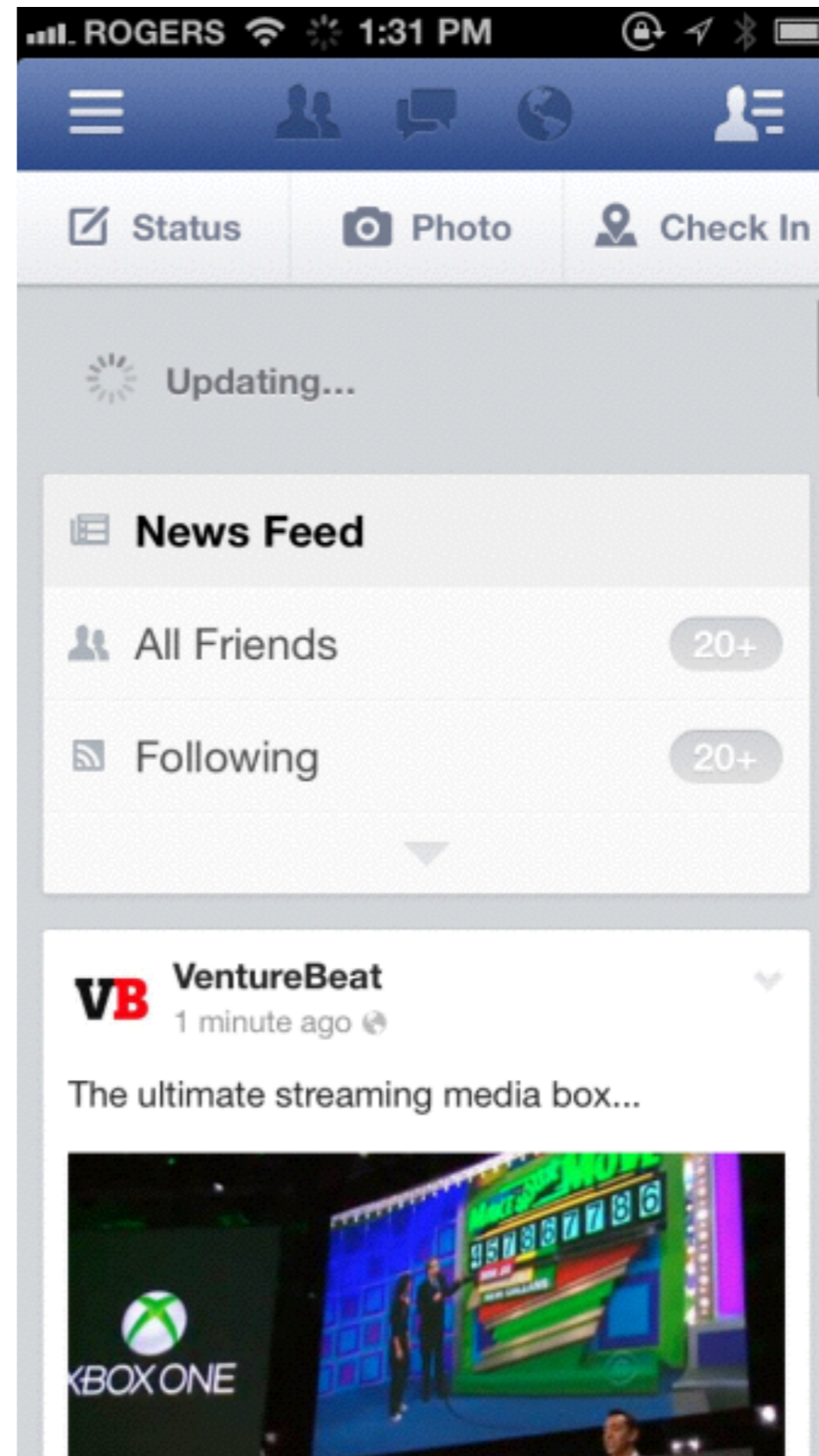
# 14.APP升级管理

- 覆盖/增量安装
- 用户信息
- 数据库变化
- 删除App



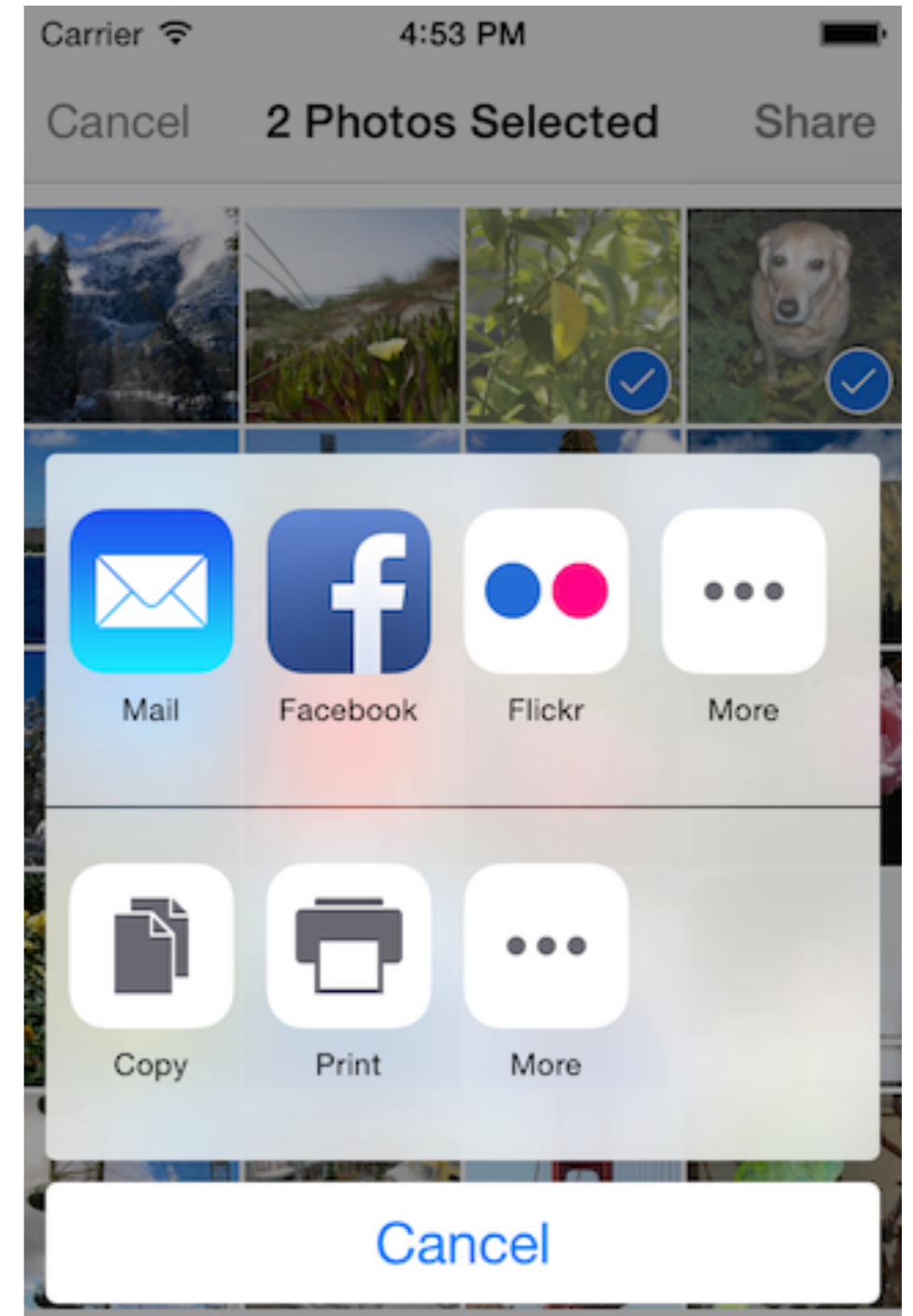
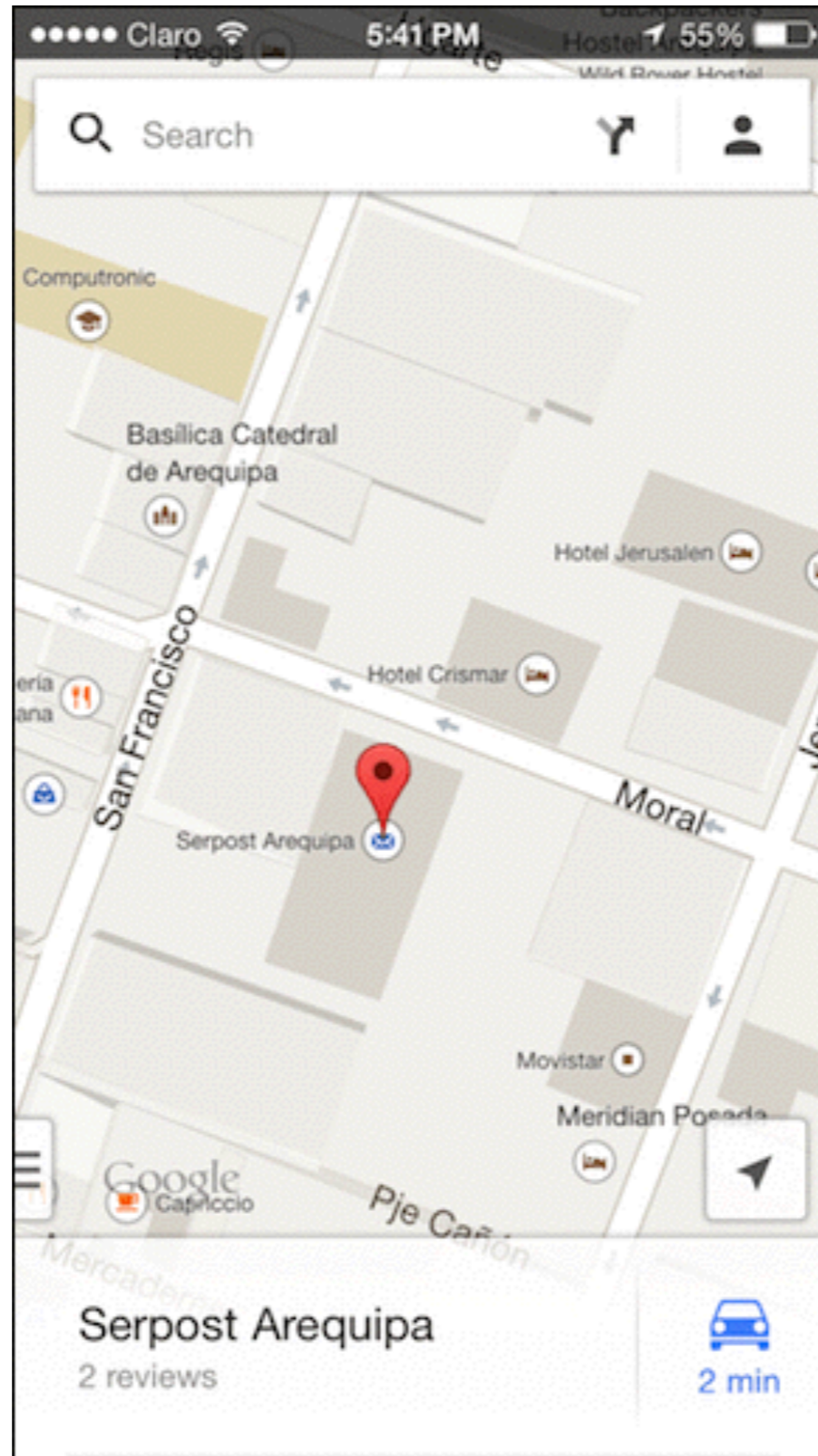
# 15.APP缓存机制

- 更新频率
- 更新显示



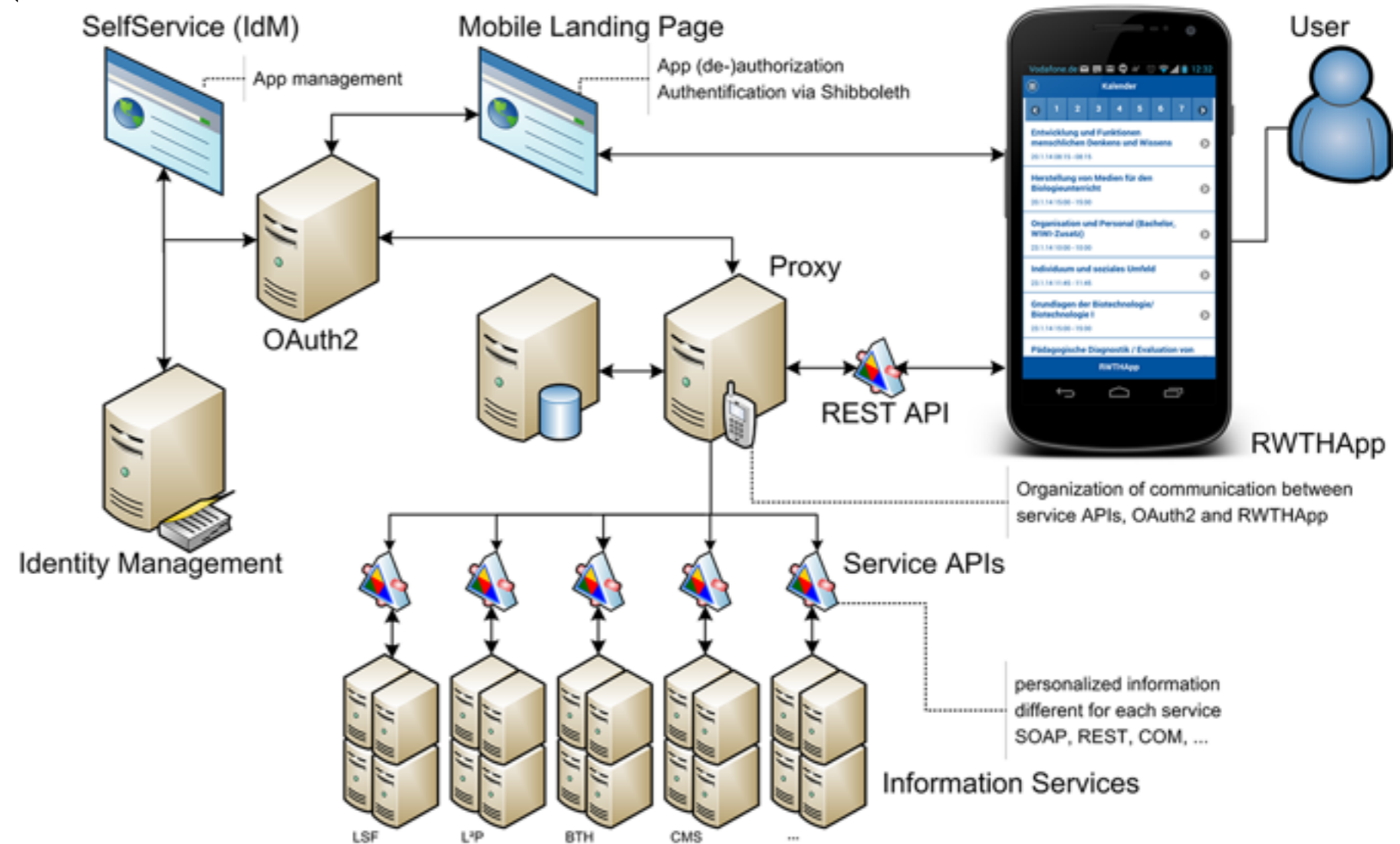
# 16. 第三方APP集成和调用

- 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

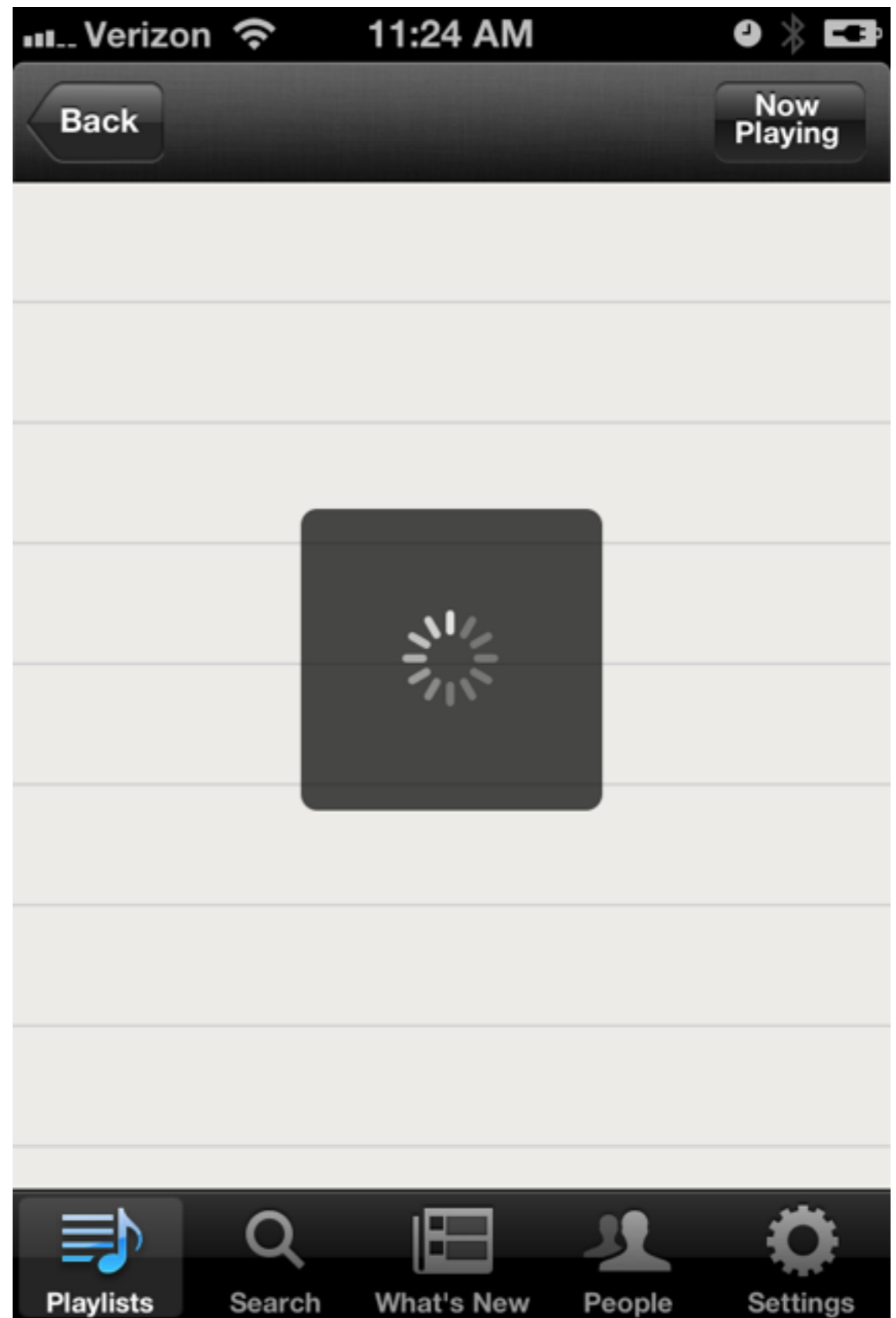
- Webservice
- iPhone Configuration Utility
- Android Developer Tools: DDMS
- SQLite数据库
- App请求中用户信息



```
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

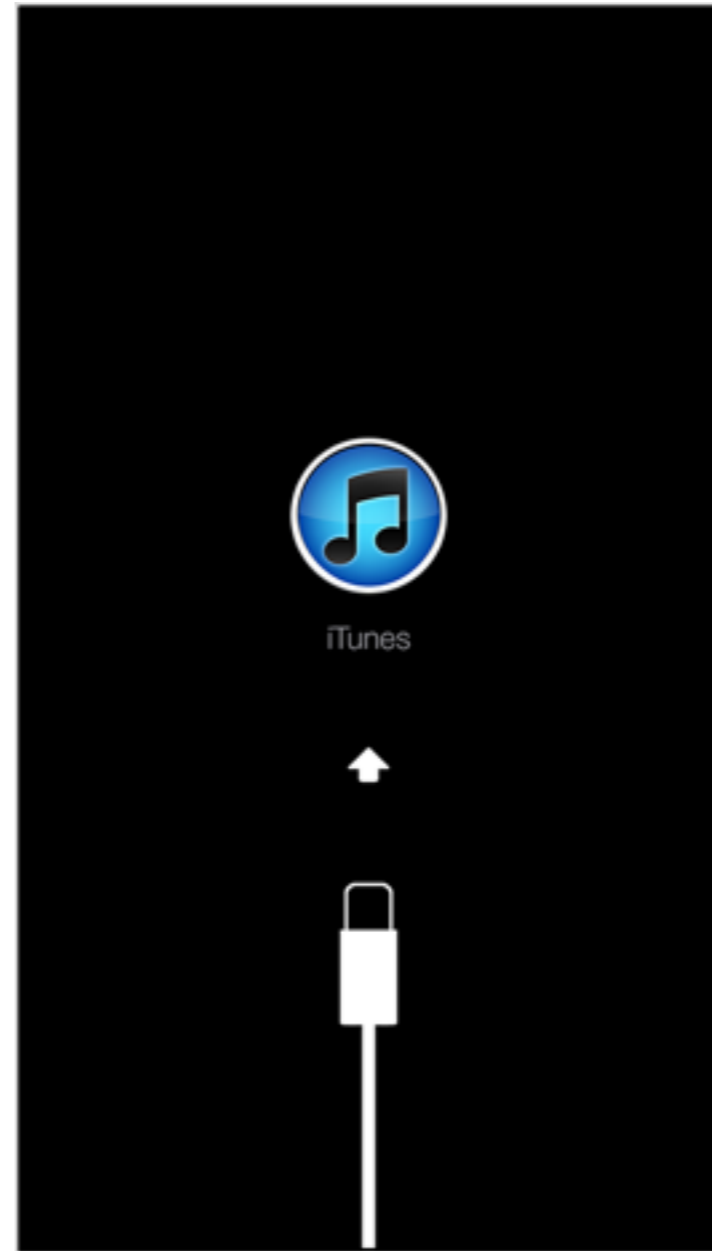




## 21.操作系统升级

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- 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

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



**TestFlight**  
iOS Beta Testing On The Fly



**Dropbox**



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# Q & A