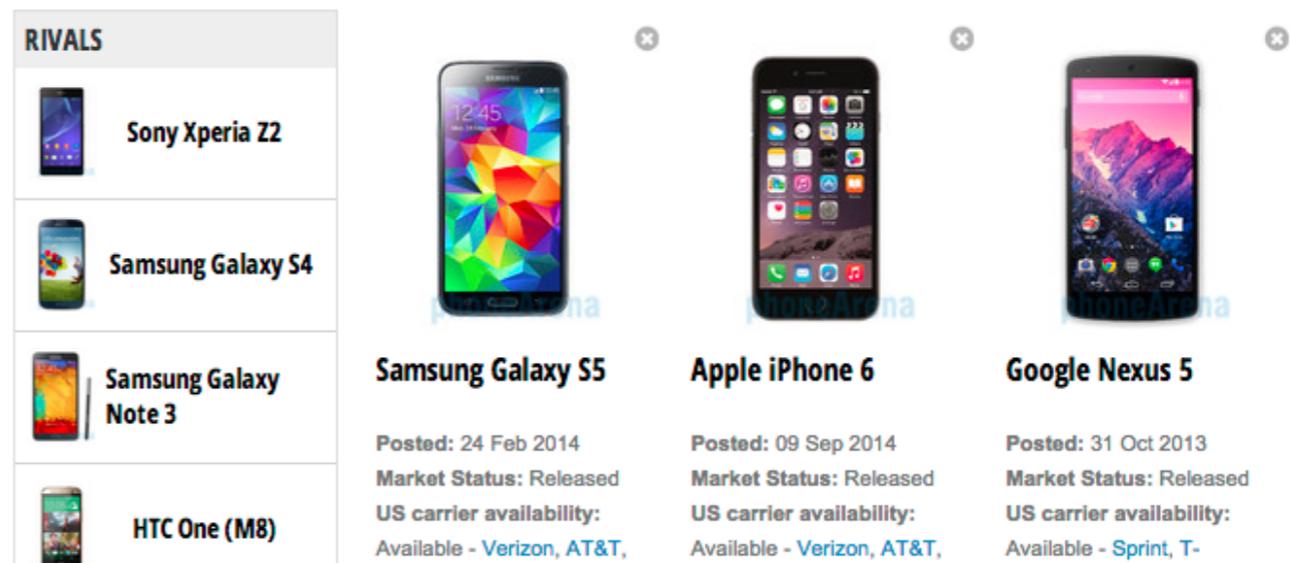

移动APP测试的22条军规

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



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

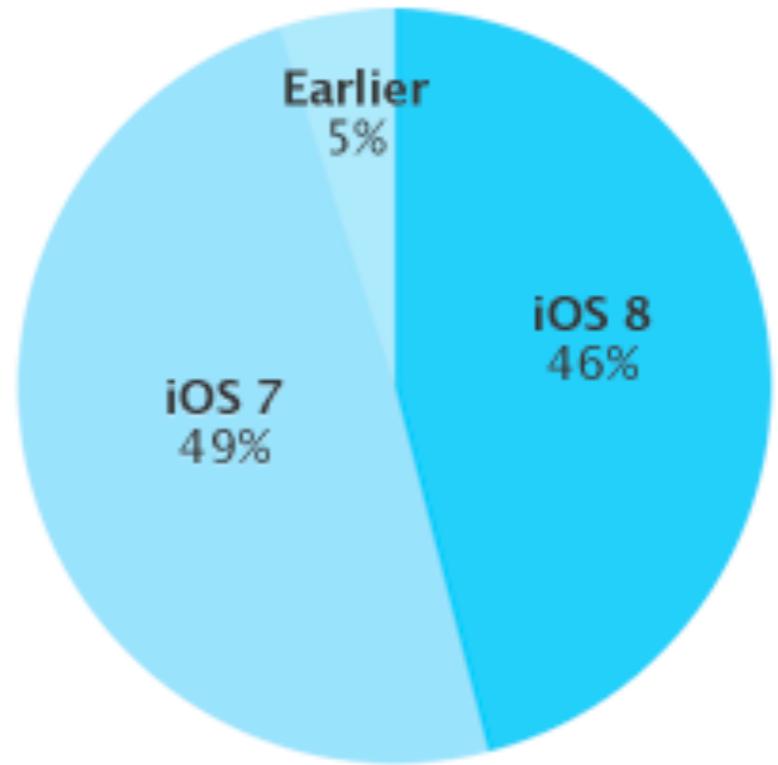
DISPLAY

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

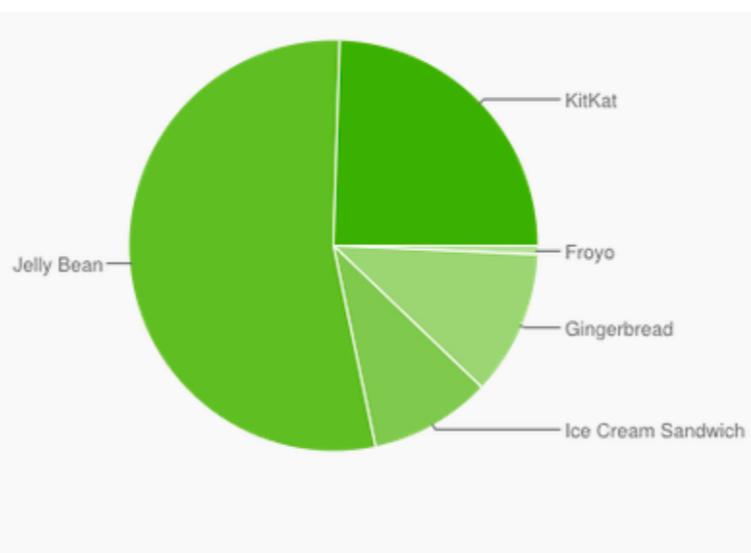
1.设备和平台

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

46% of devices are using iOS 8.



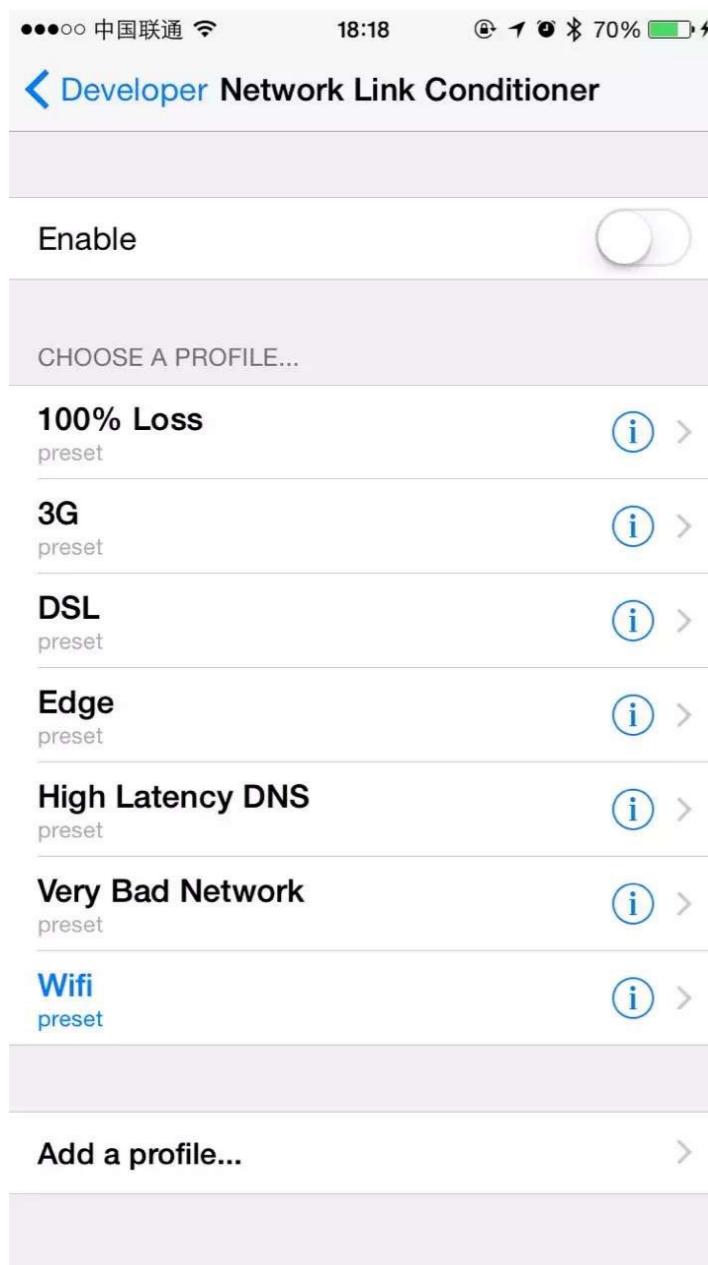
Version	Codename	API	Distribution
2.2	Froyo	8	0.7%
2.3.3 - 2.3.7	Gingerbread	10	11.4%
4.0.3 - 4.0.4	Ice Cream Sandwich	15	9.6%
4.1.x	Jelly Bean	16	25.1%
4.2.x		17	20.7%
4.3		18	8.0%
4.4	KitKat	19	24.5%



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

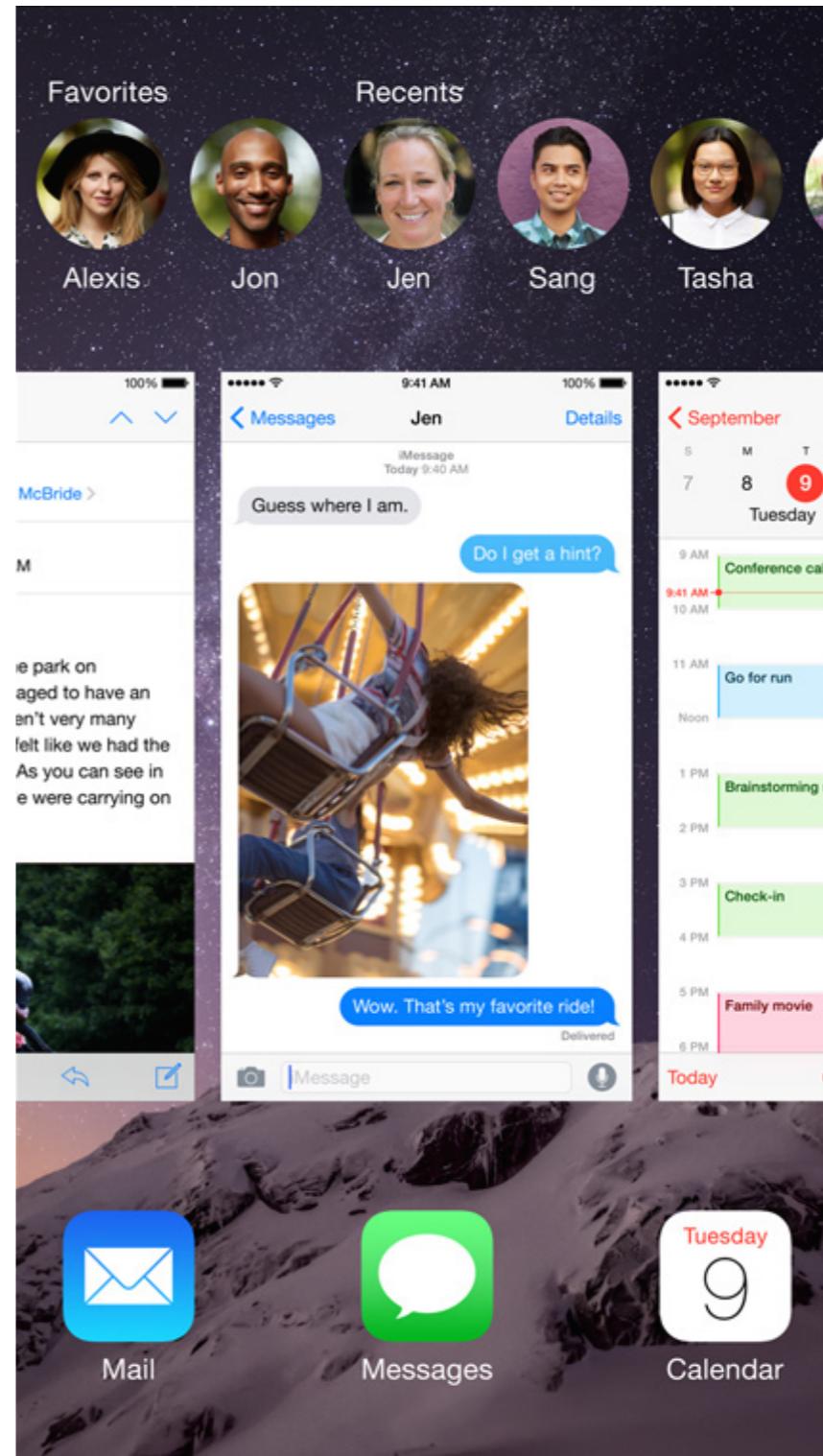
2. 移动网络切换

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



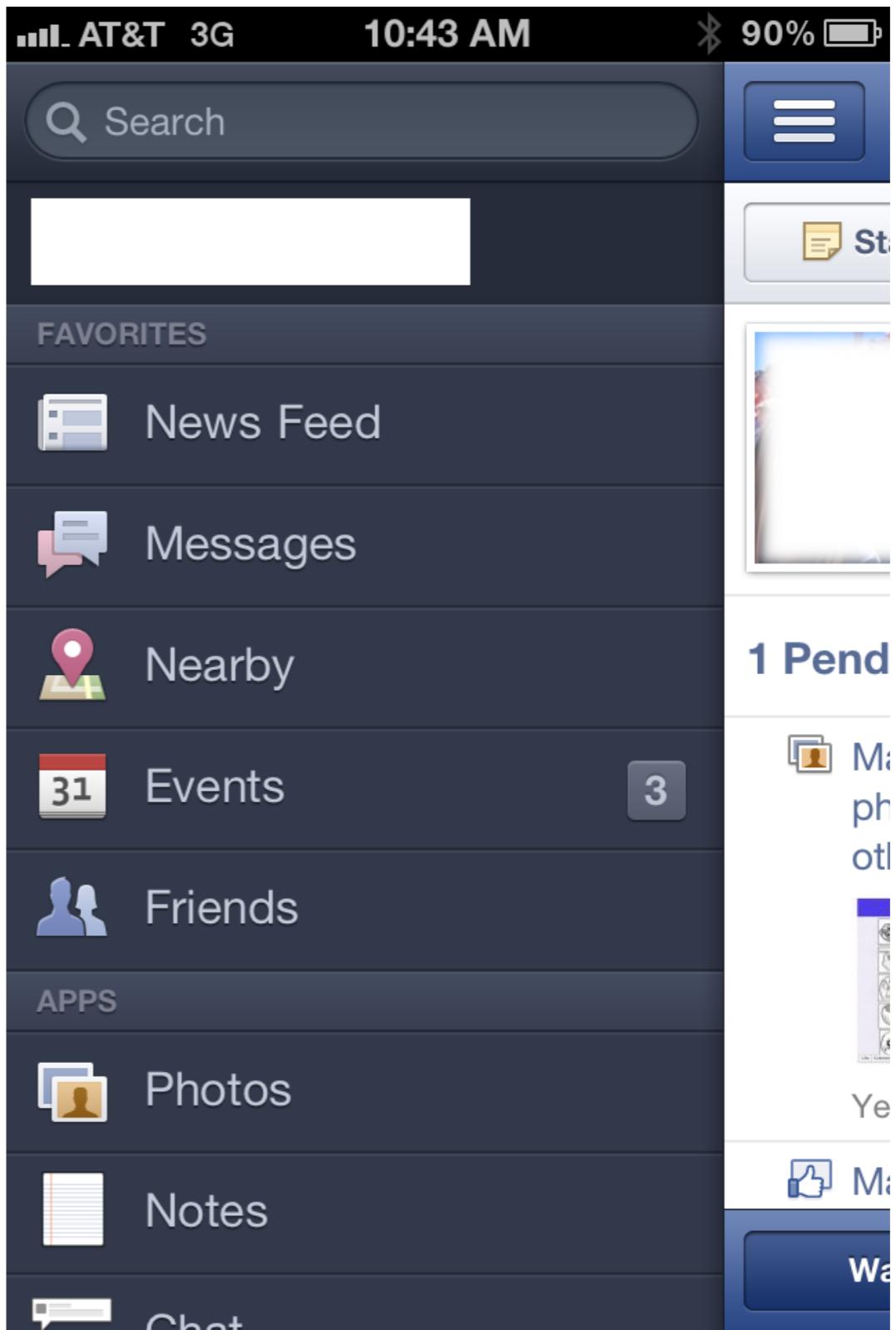
3.多任务处理

- App切换处理
- 恢复
- 流畅度



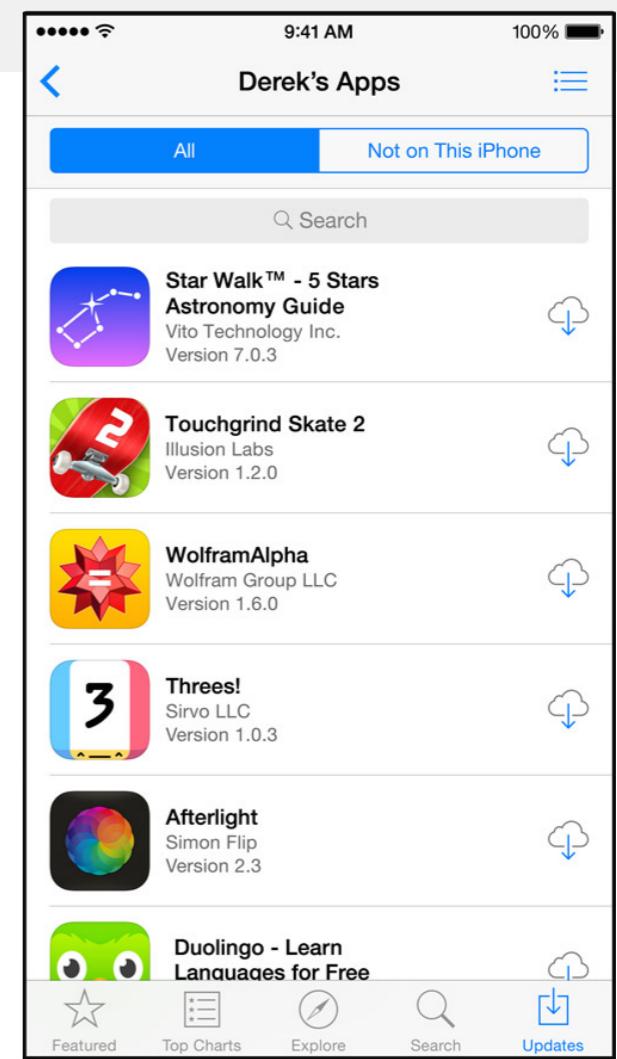
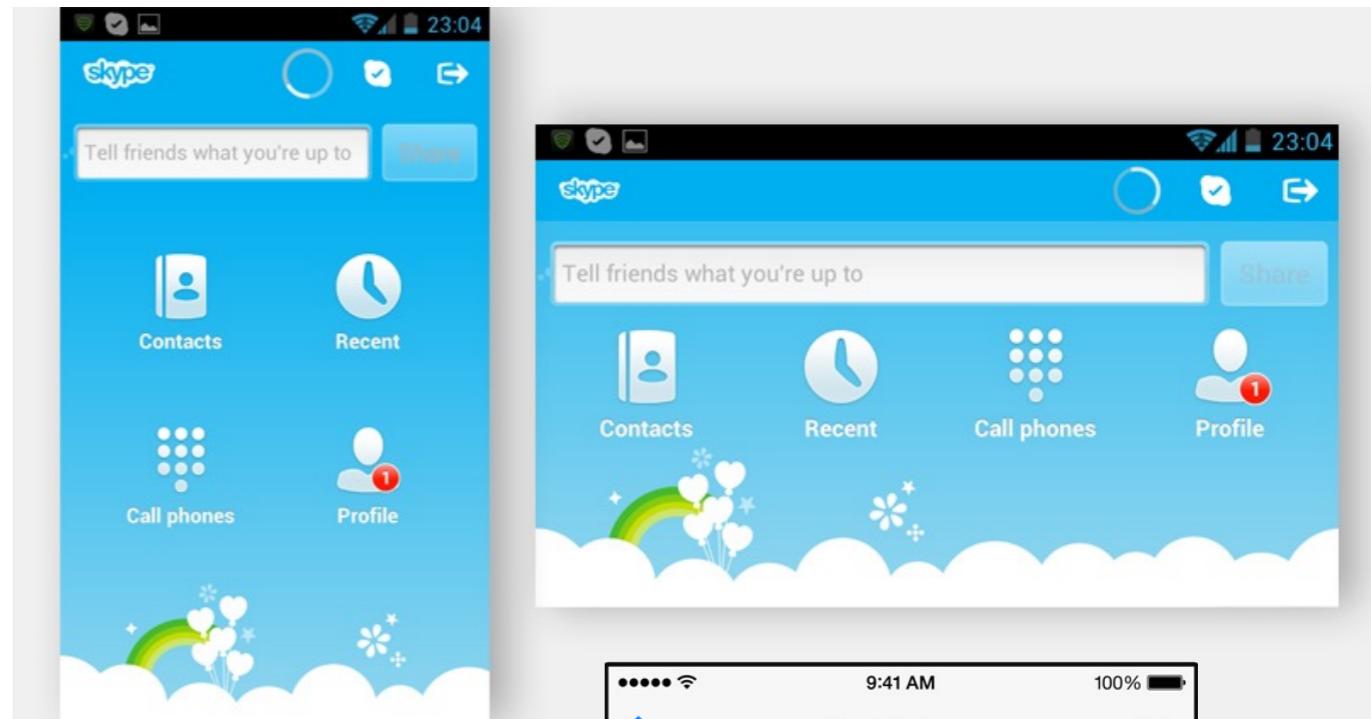
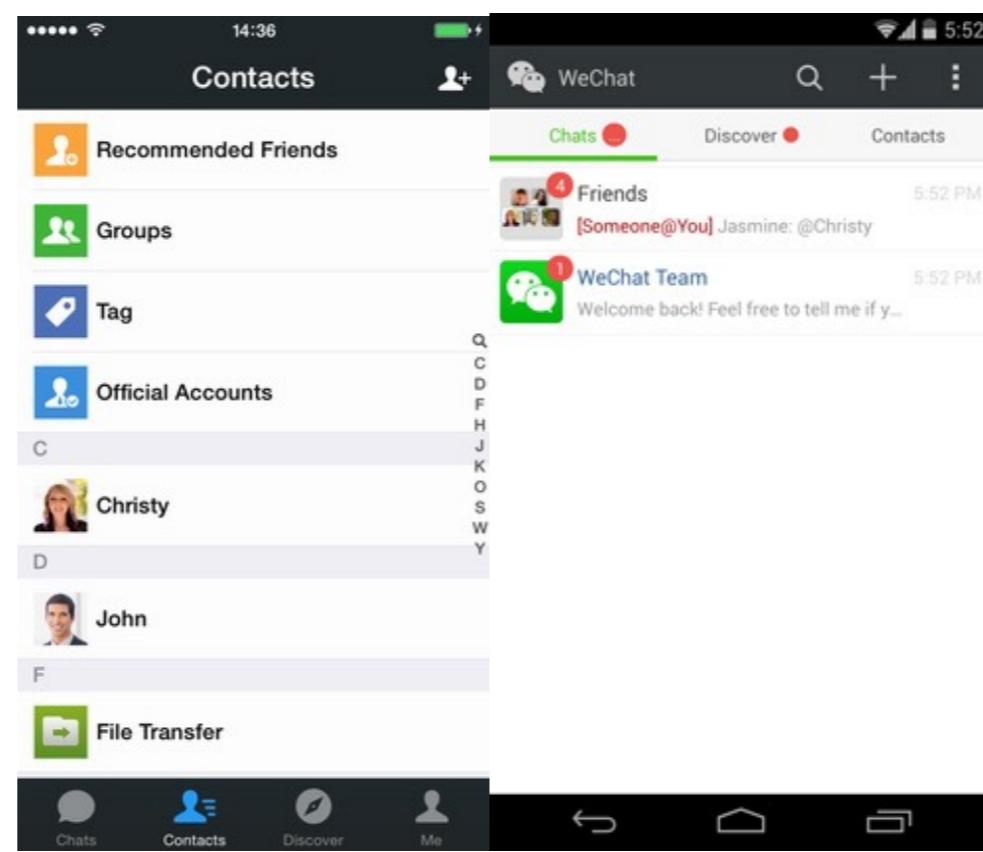
4. 手势操作

- 应用手势
- 操作系统手势



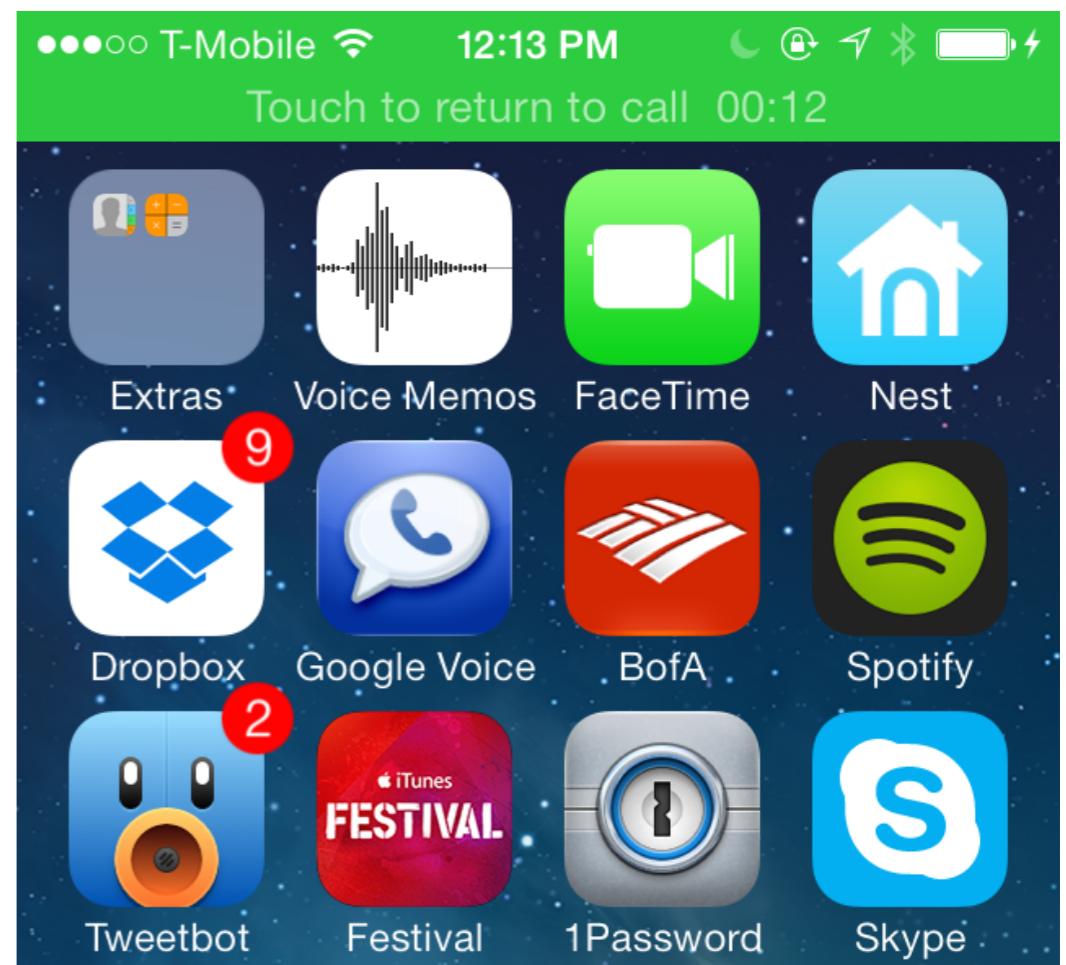
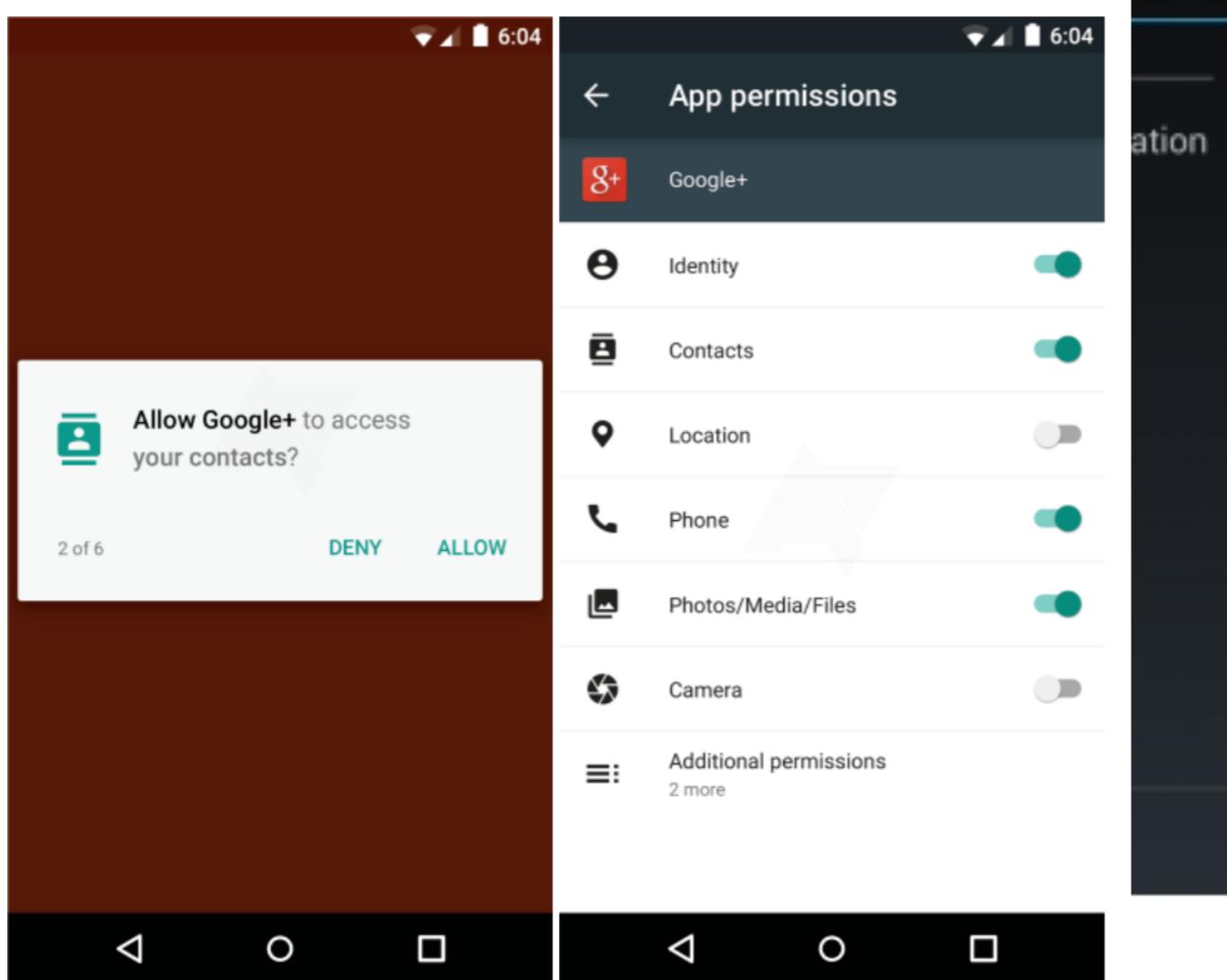
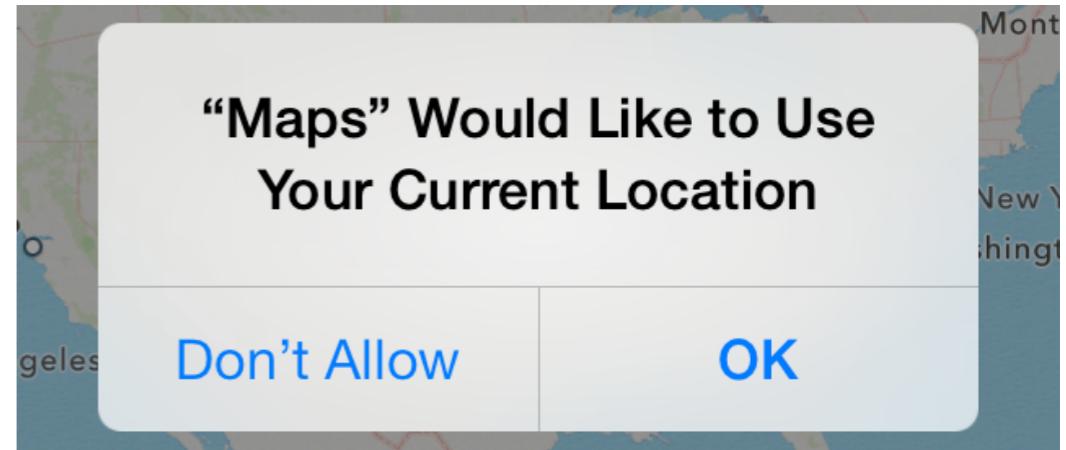
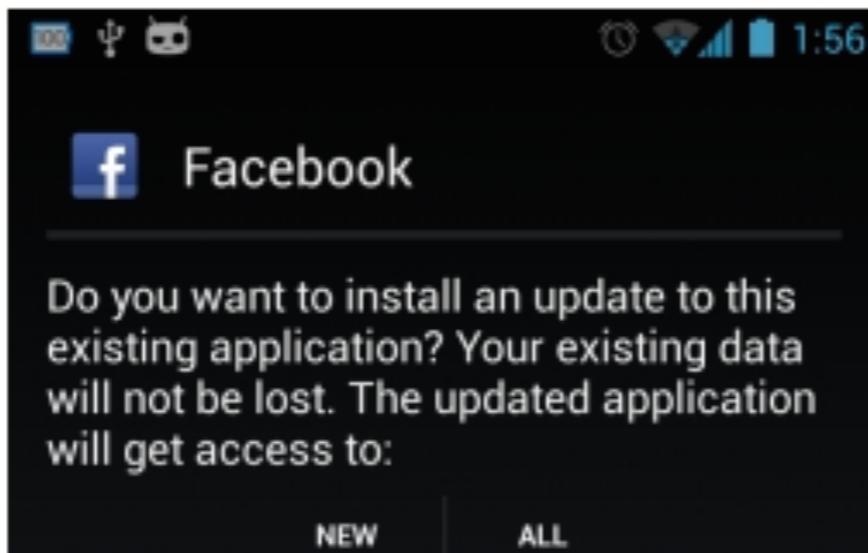
5. 用户体验

- 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



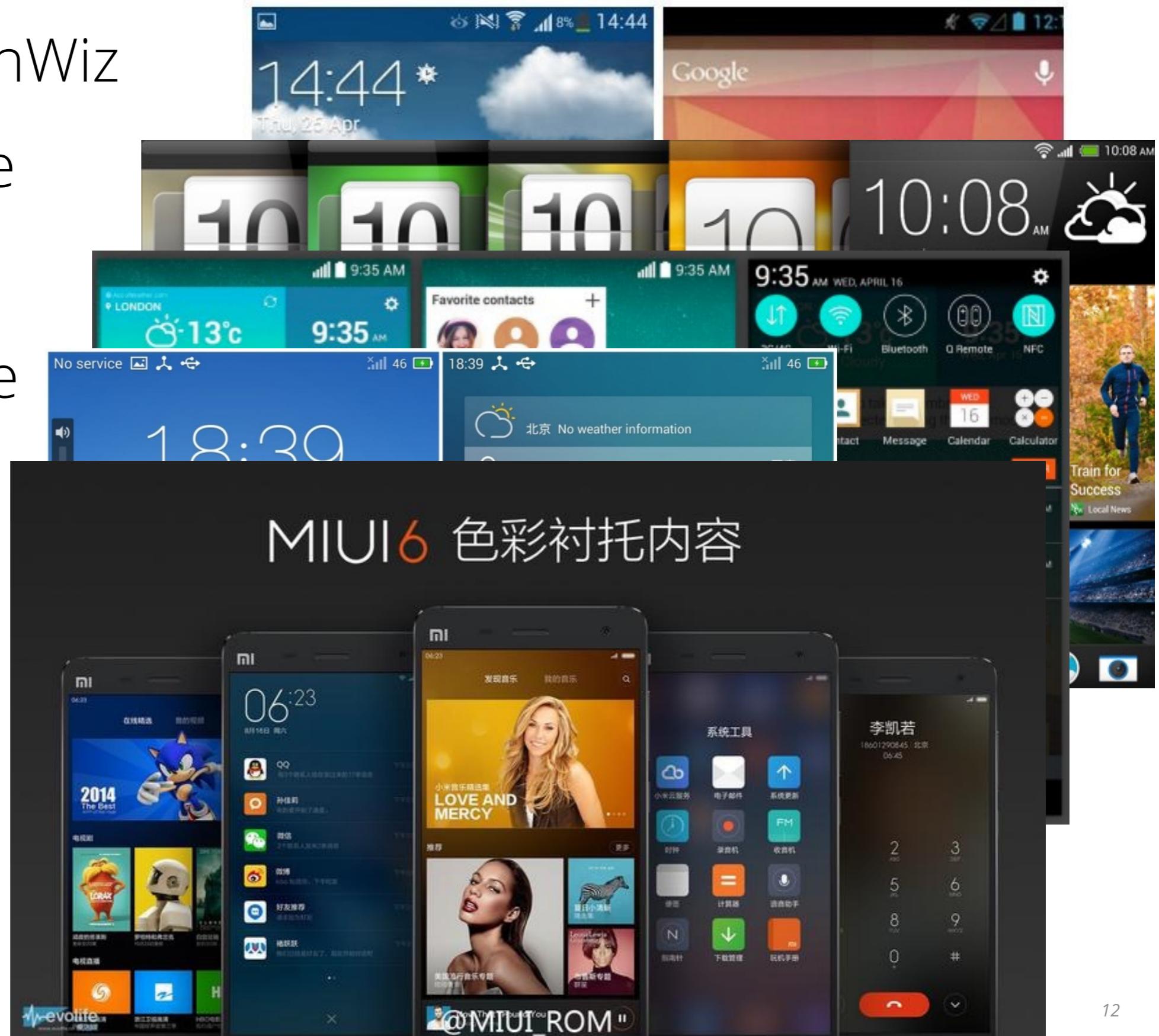
8. 不同设备信息同步

- 一处改变
- 多处同步



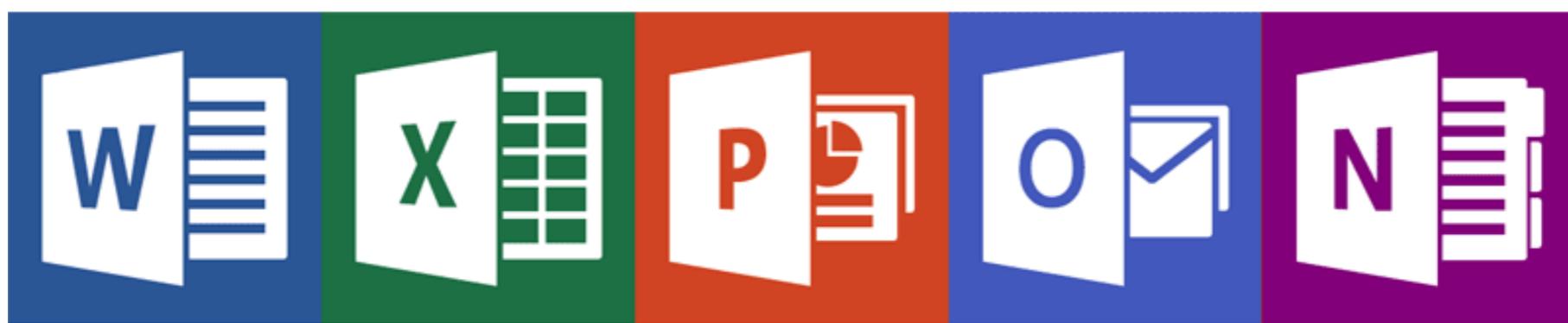
9.特定设备

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



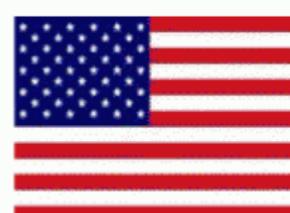
10.多文件格式支持

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



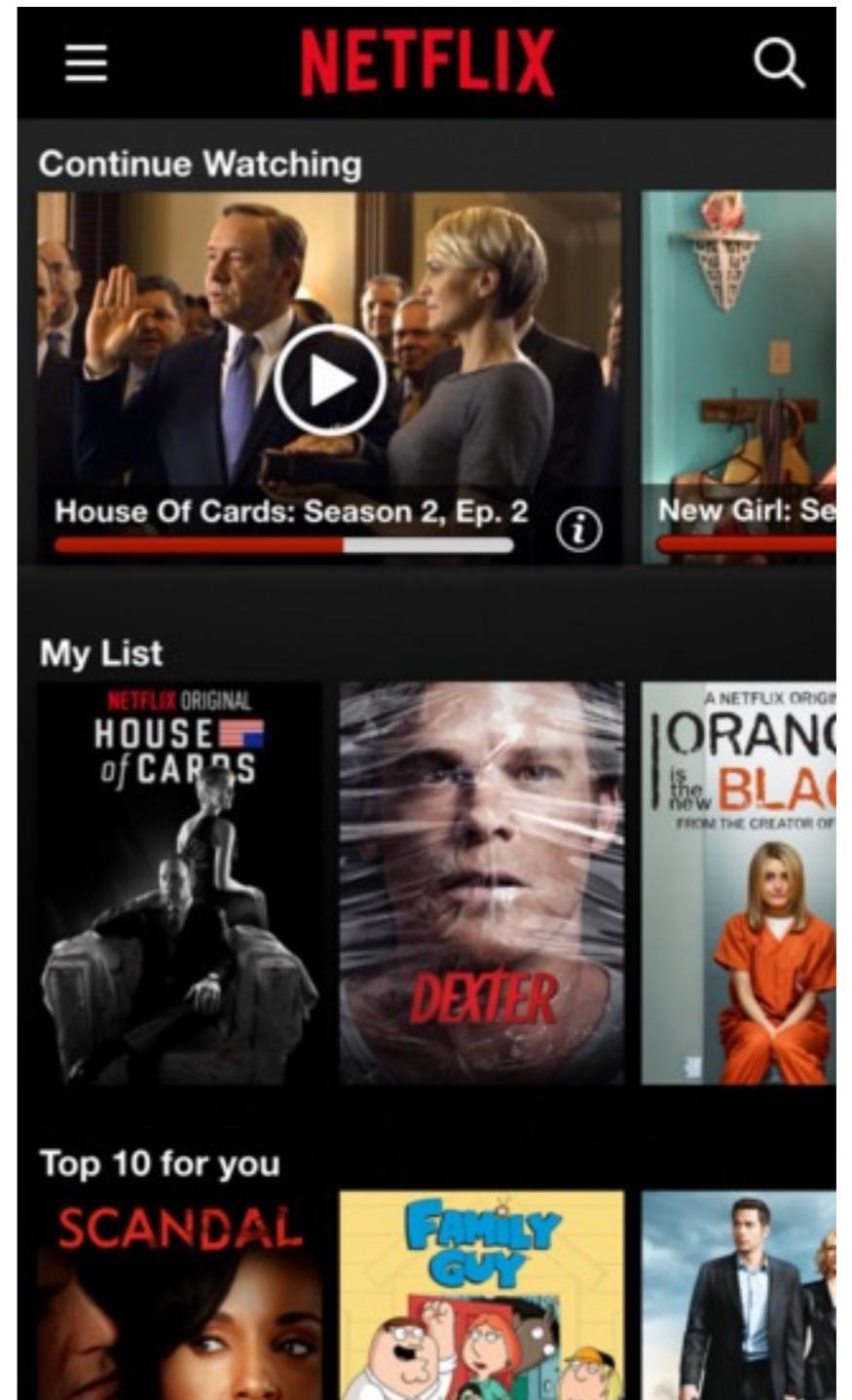
11.国家和地区支持

- 文字显示
- 时间和日期格式
- 输入法



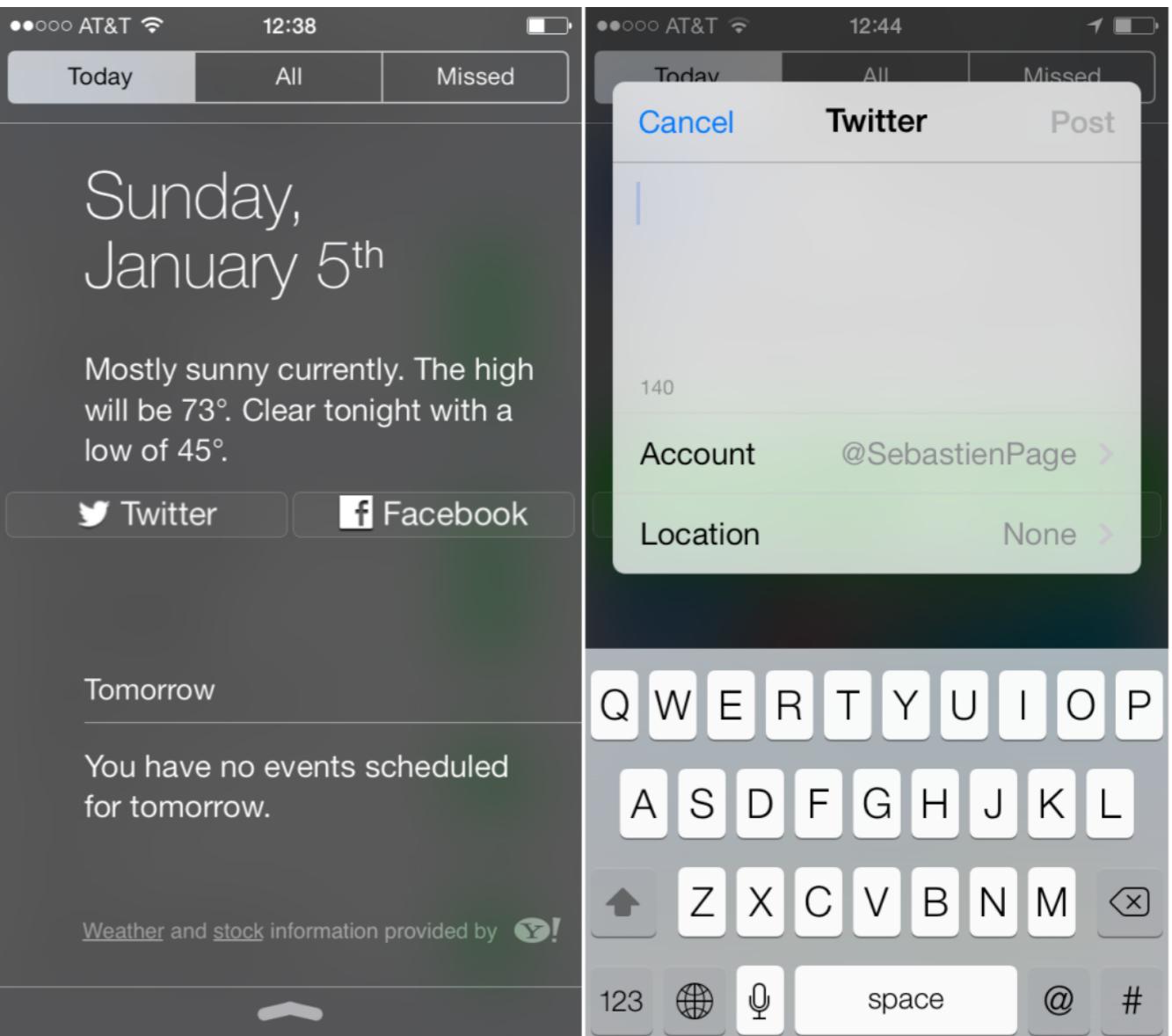
12.高内存占用

- 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

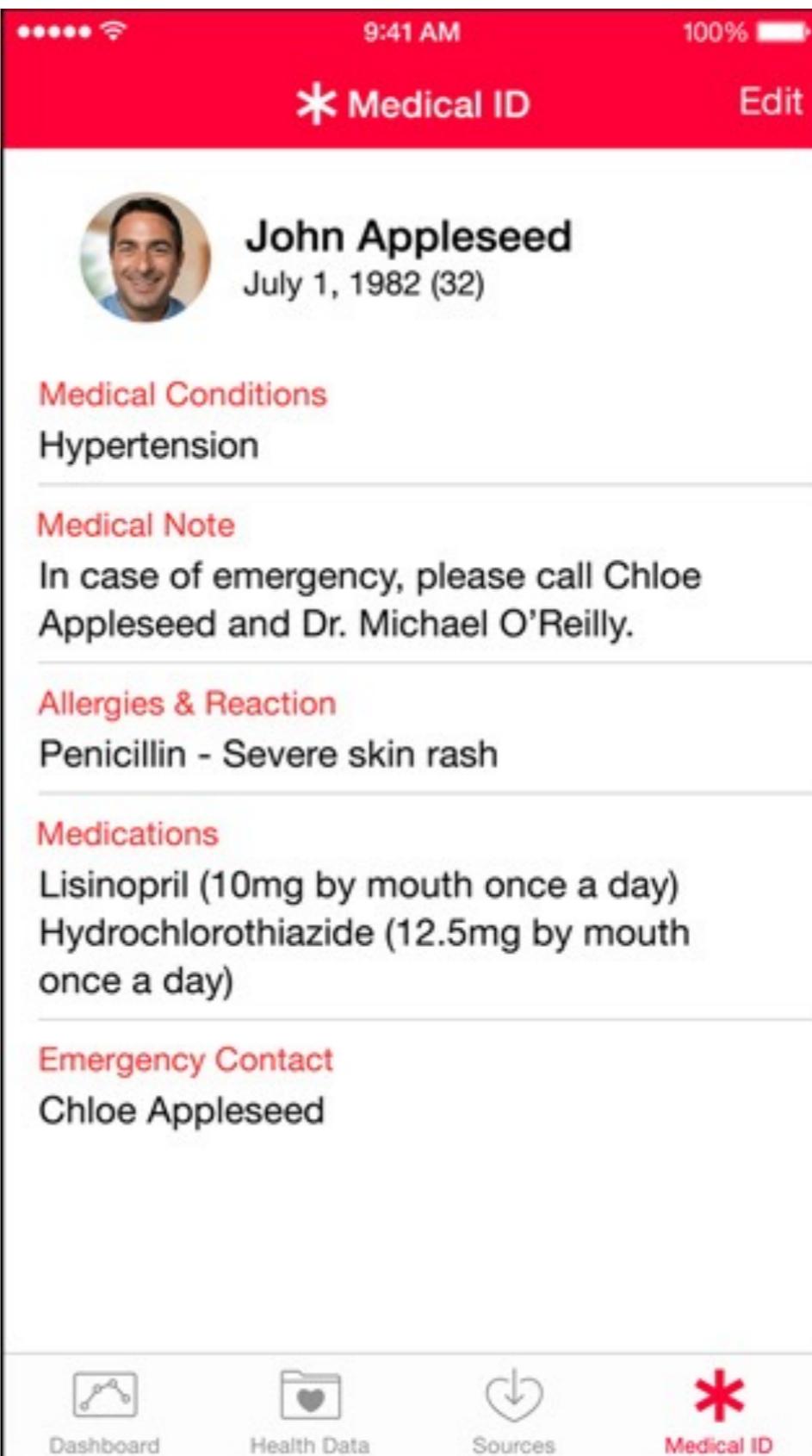


在app中实现主题颜色的切换



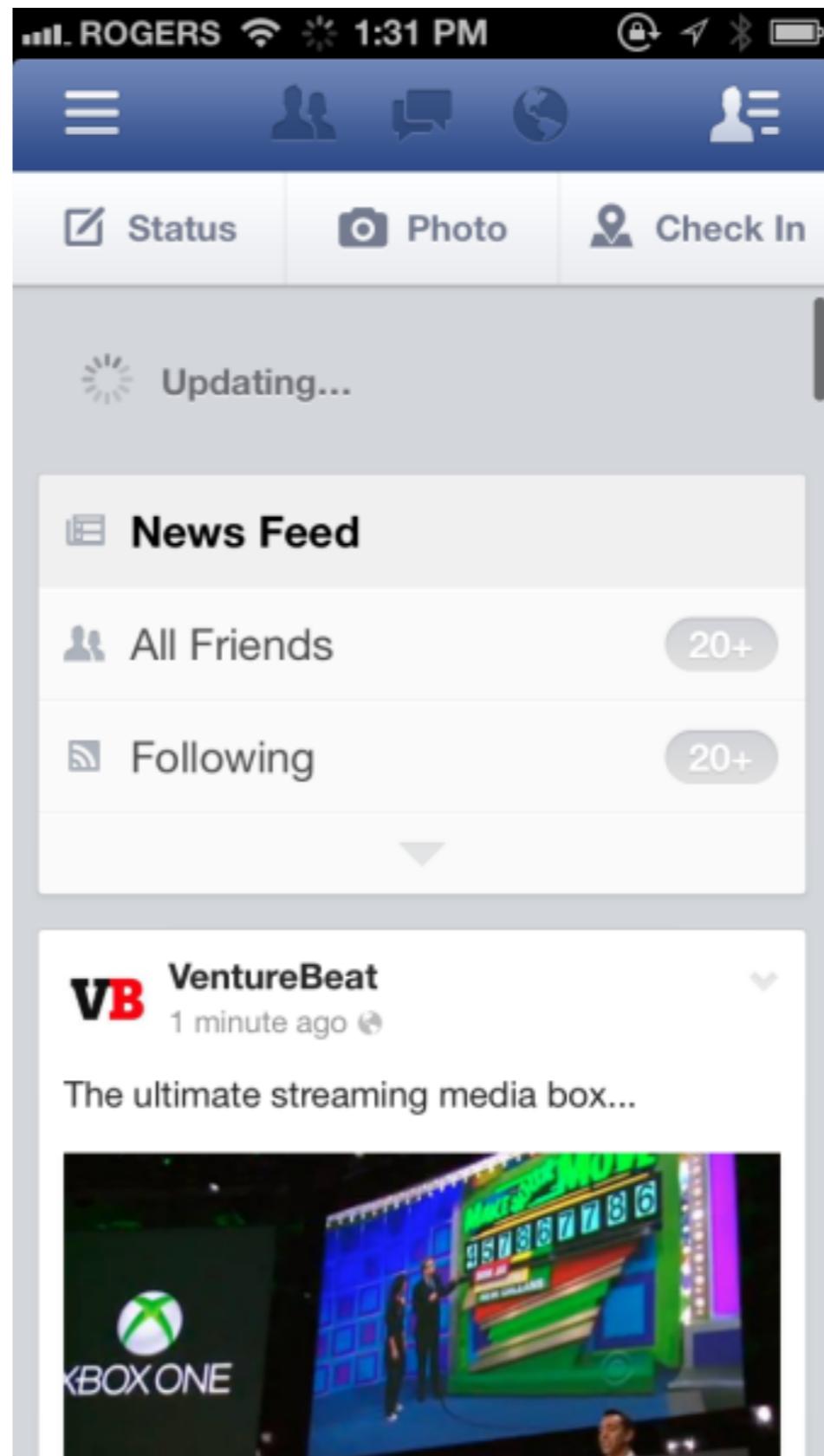
14.APP升级管理

- 覆盖/增量安装
- 用户信息
- 数据库变化
- 删除App



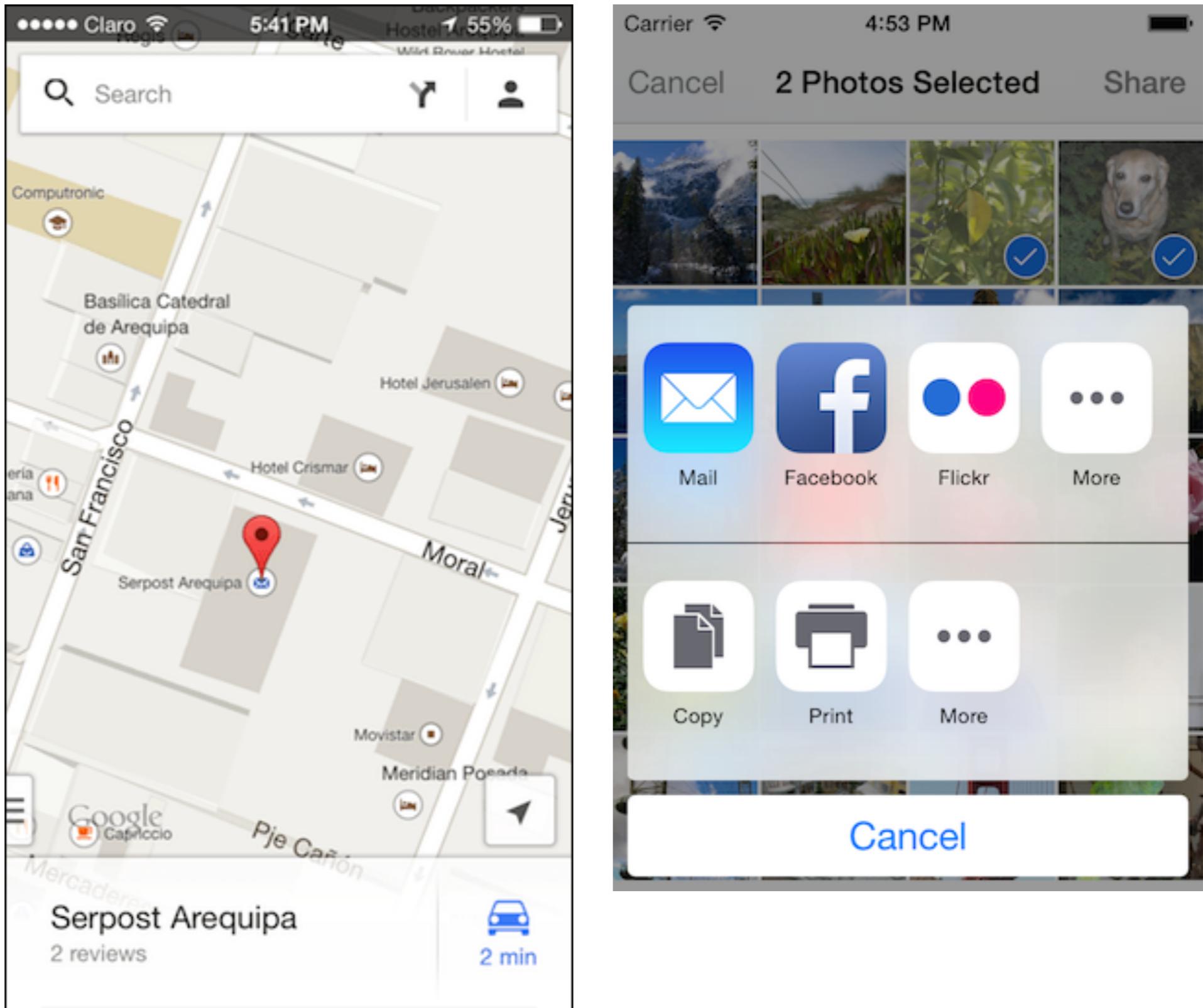
15.APP缓存机制

- 更新频率
- 更新显示



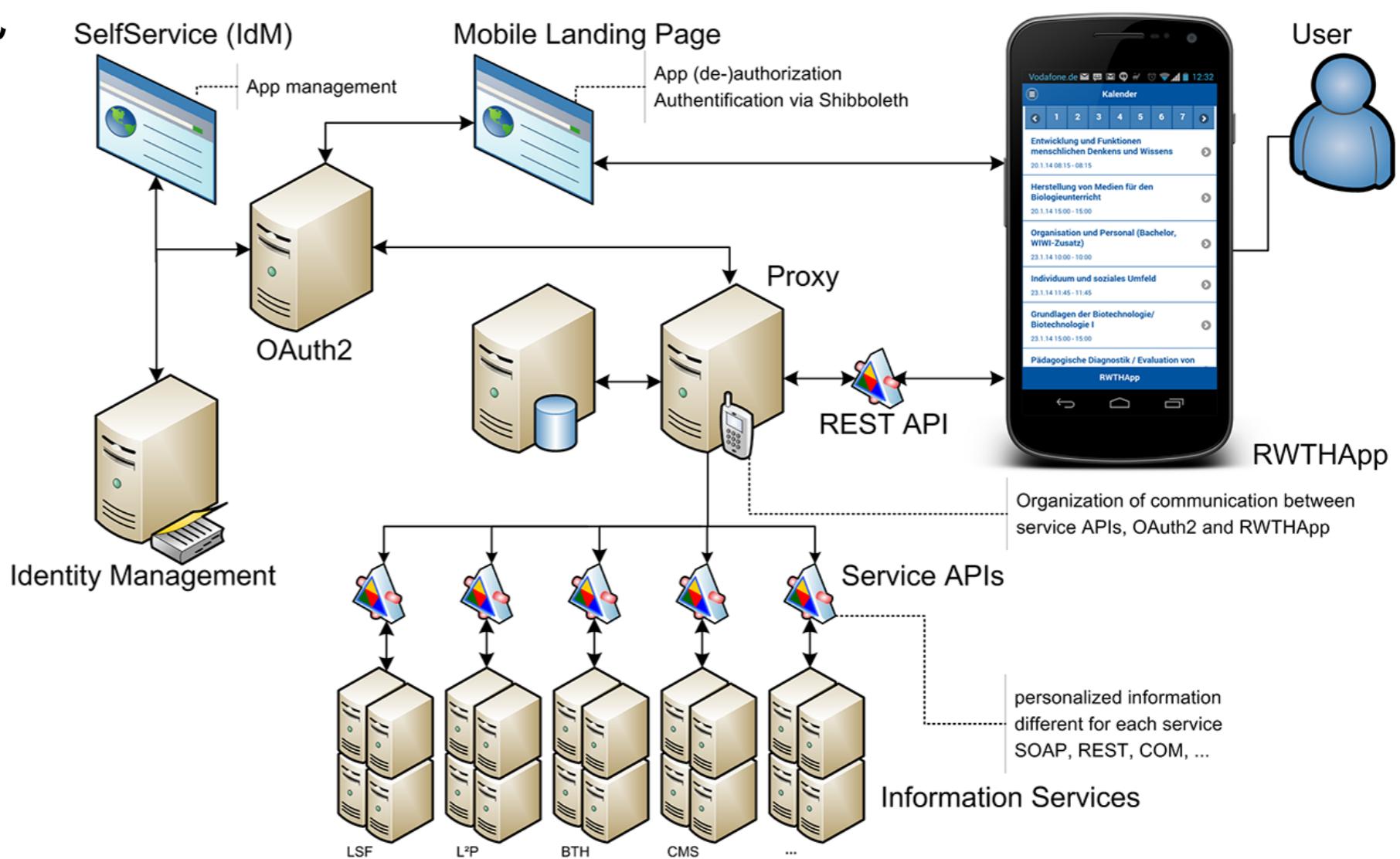
16.第三方APP集成和调用

- app集成
- app调用



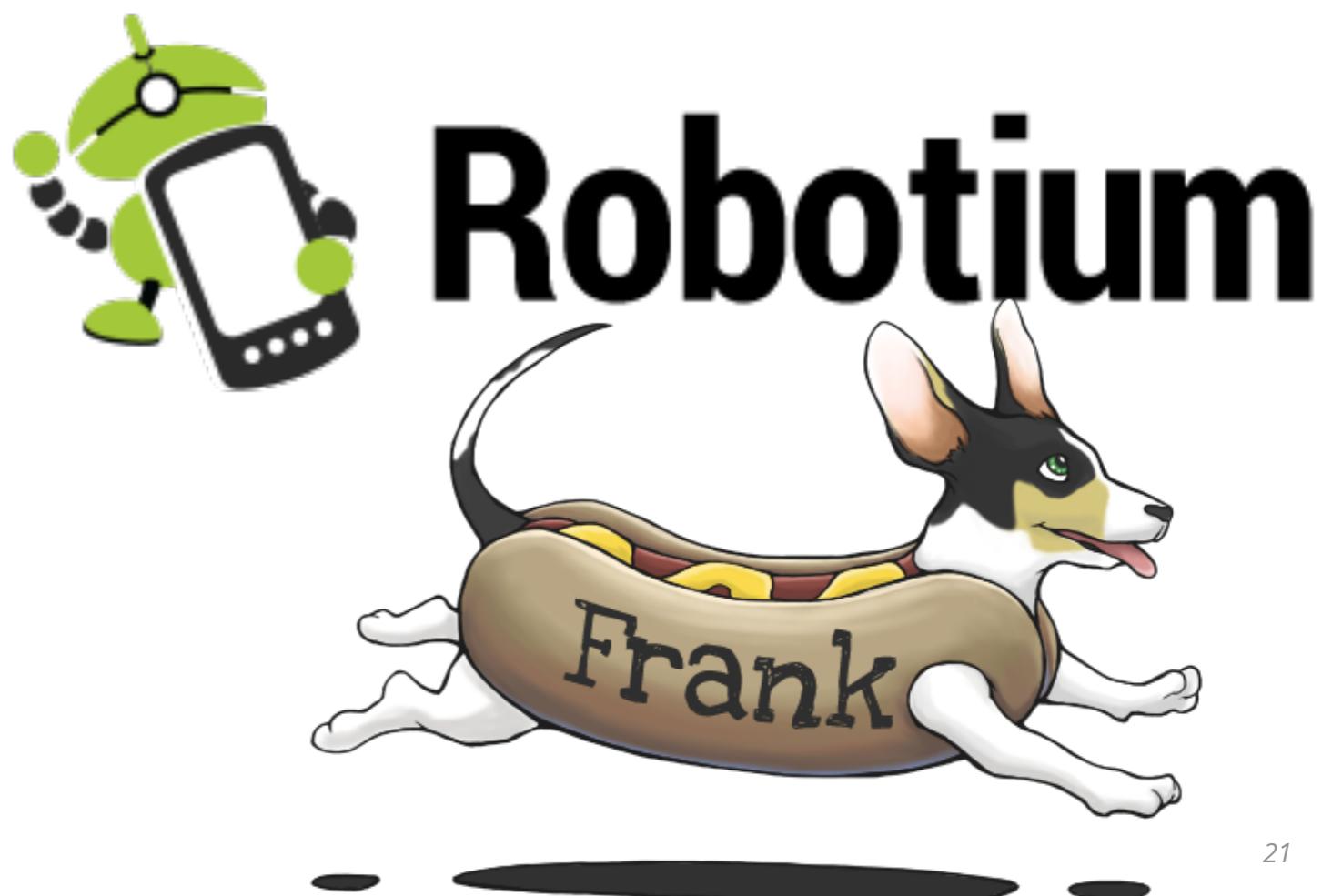
17.APP依赖

- 第三方系统/app
- WebService
- API和集成测试



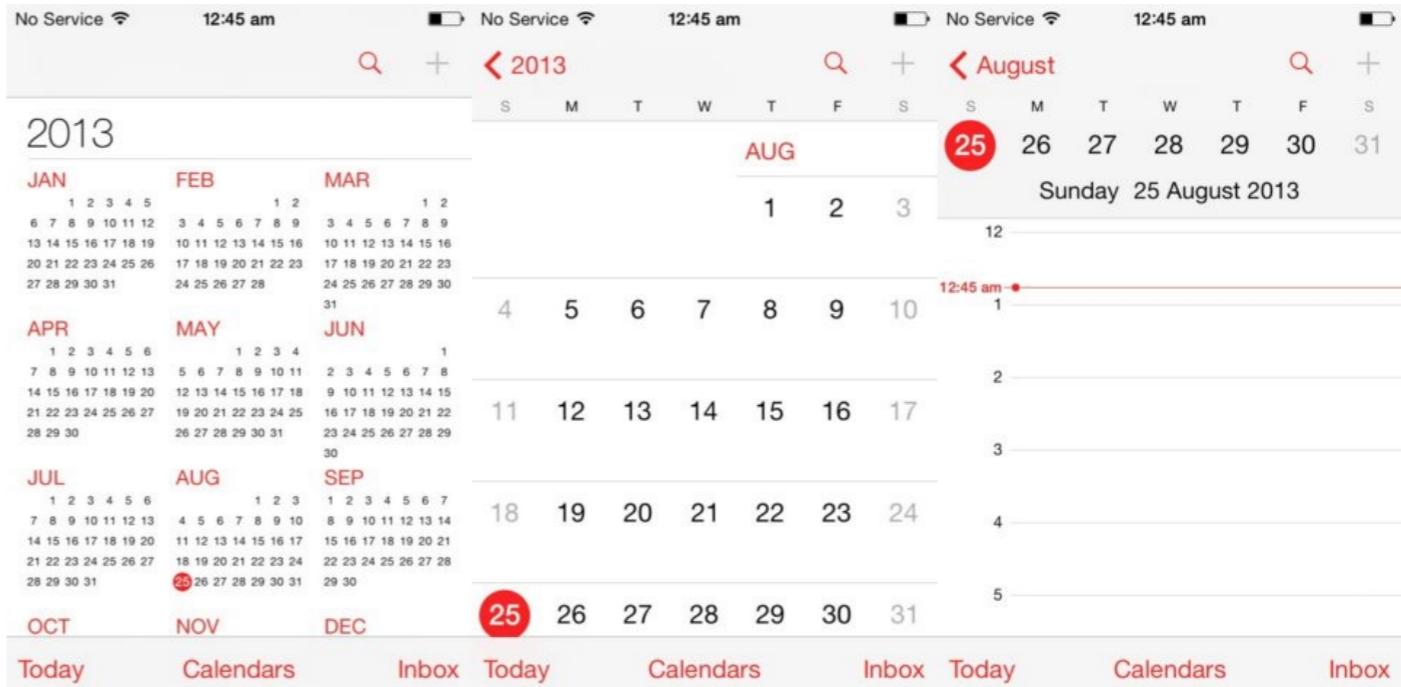
18. 自动化测试和探索式测试

- 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



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

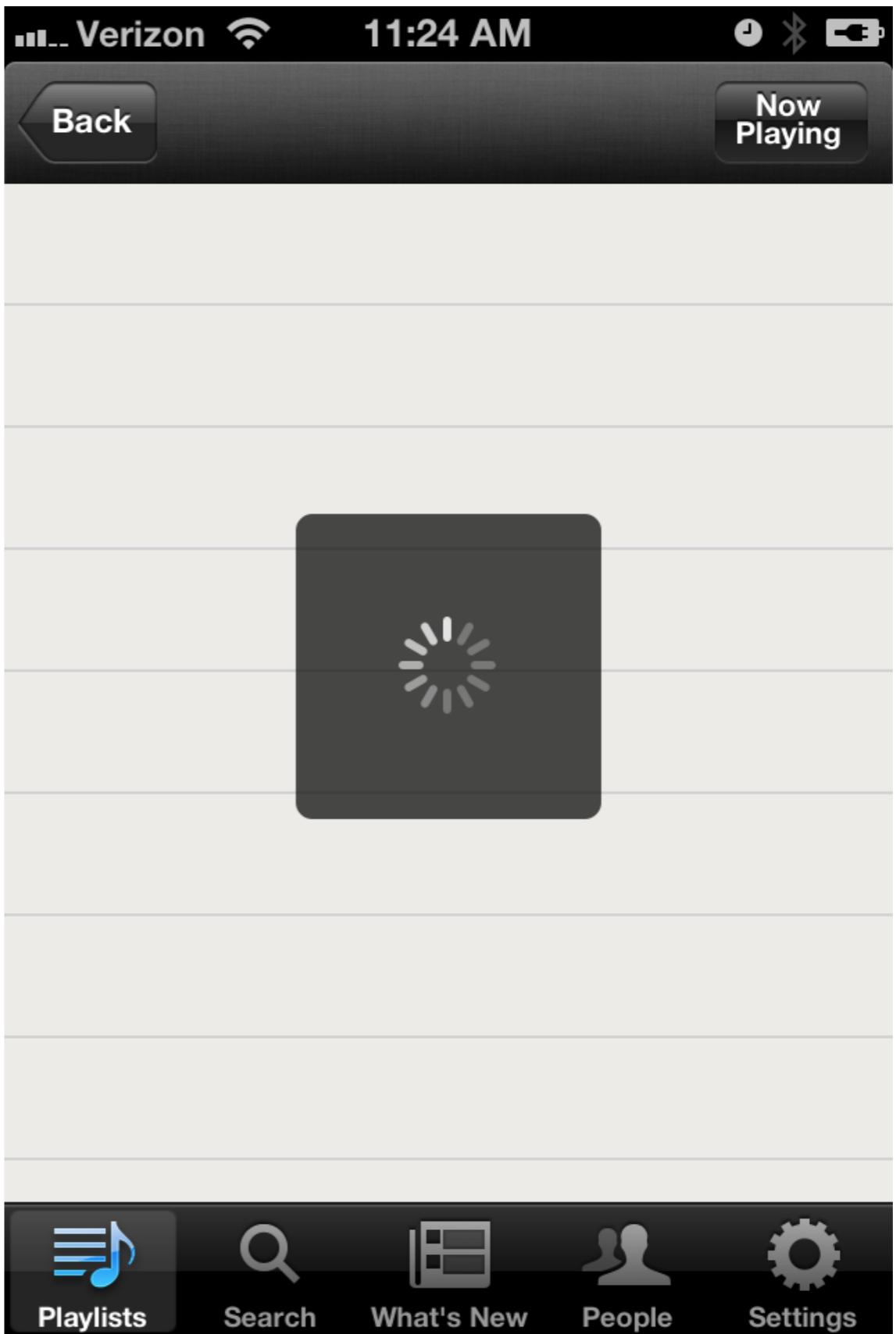
- WebService
- iPhone Configuration Utility
- Android Developer Tools: DDMS
- SQLite数据库
- App请求中用户信息

```
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>
```



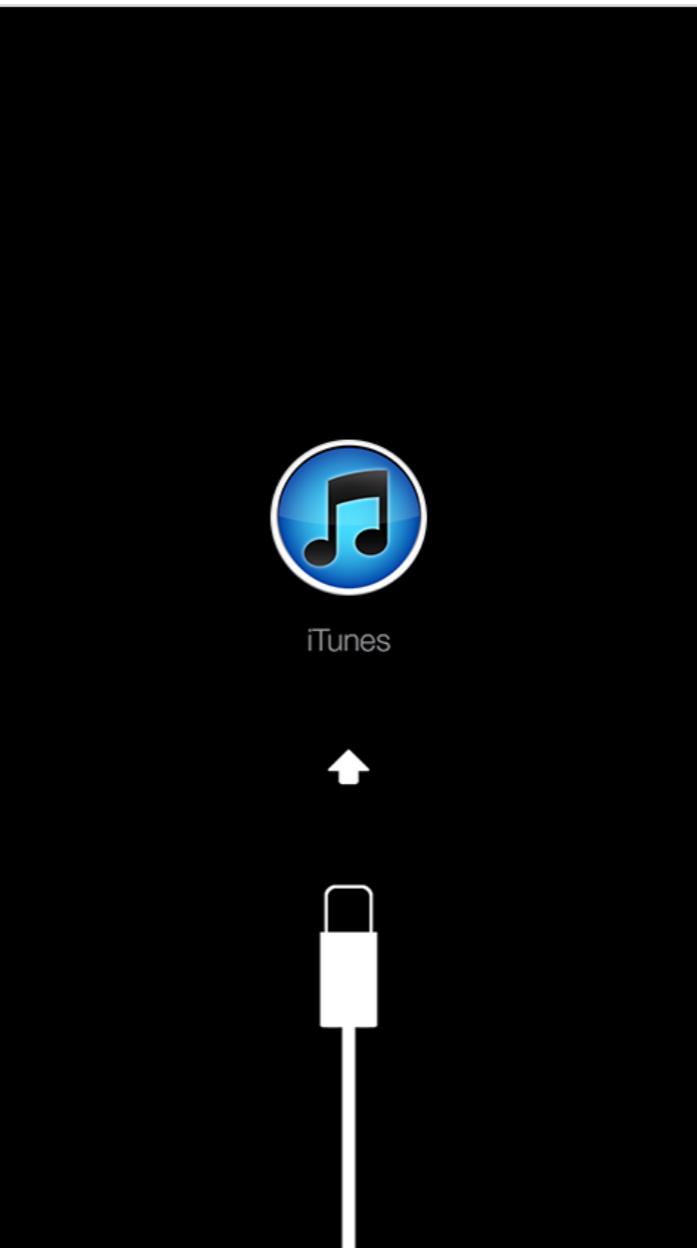
20. 性能测试

- 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





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Q & A