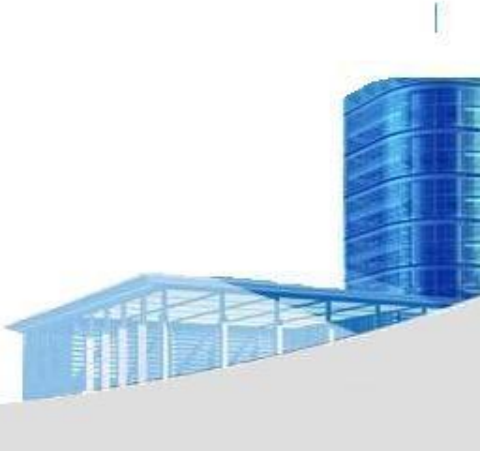
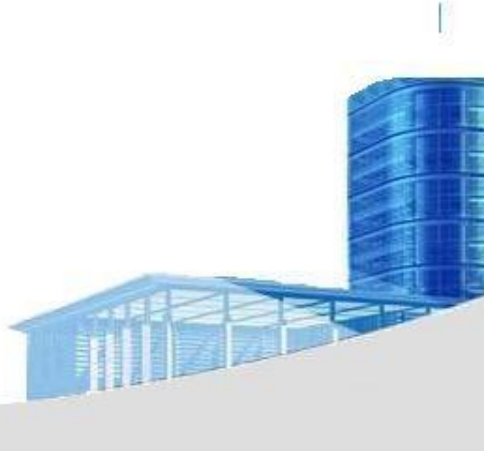
Ch.18 MobileApp Design



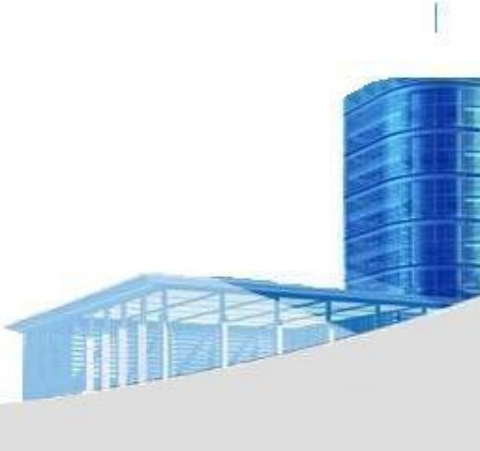
18.1 Mobile Development Considerations – 1

- Multiple hardware and software platforms
- Many development frameworks and programming languages.
- Many app stores with differing acceptance rules and tool requirements
- Short development cycles
- User interface limitations



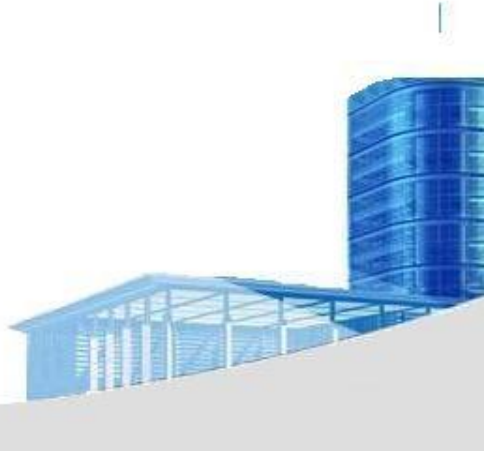
18.1 Mobile Development Considerations – 2

- Complex camera/sensor interaction
- Effective use of context
- Power management
- Security and privacy models/policies
- Device limitations (computation and storage)
- Integration of external services
- Texting complexities



18.2 MobileApp Development Process Model

- Formulation
- Planning
- Analysis
- Engineering
- Implementation and testing
- User evaluation



18.3 MobileApp Quality Checklist - 1

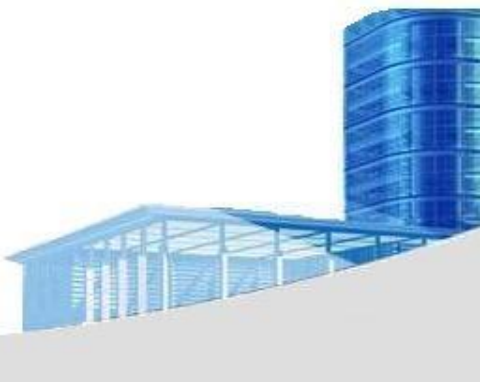
- Can content and/or function and/or navigation options be tailored to the user's preferences?
- Can content and/or functionality be customized to the bandwidth at which the user communicates? Does the app account for weak or lost signal in an acceptable manner?
- Can content and/or function and/or navigation options be made context aware according to the user's preferences?
- Has adequate consideration been given to the power availability on the target device(s)?
- Have graphics, media (audio, video), and other web or cloud services been used appropriately?

18.3 MobileApp Quality Checklist - 2

- Is the overall page design easy to read and navigate?
- Does the app take screen size differences into account?
- Does the user interface conform to the display and interaction standards adopted for the targeted mobile device(s)?
- Does the app conform to the reliability, security, and privacy expectations of its users?
- What provisions have been made to ensure app remains current?
- Has the MobileApp been tested in all targeted user environments and for all targeted devices?

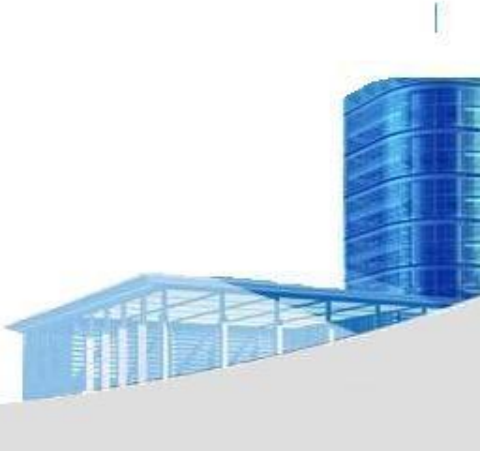
18.4 MobileApp User Interface Design Considerations

- Define user interface brand signatures
- Focus the portfolio of products
- Identify core user stories
- Optimize UI flows and elements
- Define scaling rules
- Create user performance dashboard
- Rely on dedicated champion with user interface engineering skills



18.5 MobileApp Design Mistakes

- Kitchen sink
- Inconsistency
- Overdesigning
- Lack of speed
- Verbiage
- Non-standard interaction
- Help-and –FAQ-itis



18.6 MobileApp Design Best Practices

- Identify the audience
- Design for context of use
- Recognize line between simplicity is not laziness
- Use the platform to its advantage
- Allow for discoverability of advanced functionality
- Use clear and consistent labels
- Cleaver icons should never be developed at the expense of user understanding
- Long scrolling forms trump multiple screens

18.7 Assessing Mobile Interactive Development Environments

- General productivity features
- Third-party SDK integration
- Post-compilation tools
- Over the air development support
- End-to-end mobile application development
- Documentation and tutorials
- Graphical user interface builders

18.8 MobileApp Middleware

- **Facilitates communication and coordination of distributed components**
- **Allows developers to rely on abstractions and hide mobile environment details**
- **Helps MobileApps to achieve context awareness as required**

Case:智慧城管市民互动应用

- 智慧城市建设示范试点项目
- 提供城市管理的多项公共服务
- 提供市民快速参与城市管理的渠道
- **iOS&Android**

智慧城管应用

城管瘠疽

俄屠蛹芯

搅挠公厝

政策法规

每日变慢题

沛祥远冻

挪单求质

紧急开核告

便搏热线

关联

我的积分

我的任务

我的爱车

我的宠物

我的店铺

智慧城管应用

城管拍拍

城管动态

便民公告

政策法规

每日一题

泊车达人

挪车求助

路况预告

云呼热线

天天骑车

我的积分

我的任务

我的爱车

我的宠物

我的店铺

案卷拍拍　现场抓拍　记录查询 1

错误提示

由于网络原因，案卷上报失败。
请排除故障后重传！

重 传　取 消

请选择案卷类型

管道爆裂

路面塌陷

井盖丢失

墙体坍塌

其他类型

拍照　确认上报

智慧城管应用

城管拍拍

城管动态

便民公告

政策法规

每日一题

泊车达人

挪车求助

路况预告

云呼热线

天天骑车

我的积分

我的任务

我的爱车

我的宠物

我的店铺

泊位查询　路线导航　图例说明

泊位建议

费用最省

距离最近

杭州大厦购D座停车场
剩余车位：8
收费价格：8元/小时

坤和中心地下停车场
剩余车位：23
收费价格：10元/小时

浙江移动大厦停车场
剩余车位：3
收费价格：8元/小时

道路泊位
剩余车位：2
收费价格：8元/小时

开始导航

泊位查询　路线导航　图例说明

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开始导航

泊位查询 路线导航 图例说明

5m

环城北路

100m

前方还有剩余辅道2个直行100位后使用泊位。

前方还有剩余辅道，直行100位后使用泊位。

泊位查询　　路线导航　　图例说明

您当前所在的位置

道路停车泊位紧张

道路停车泊位较少

道路停车泊位充足

经营性停车泊位紧张

经营性停车泊位较少

经营性停车泊位充足

小区企业内部停车泊位紧张

小区企业内部停车泊位较少

小区企业内部停车泊位充足

Case: Features

- 应用界面简洁美观，易于上手
- 满足iOS、Android多平台使用需求
- 应用功能贴近用户实际需求
- 案件上报成功或错误均有明确提示
- 泊位查找选项充分考虑到用户喜好，可以进行个性化定制
- 注意点：后台数据库需要定时更新，保证数据准确性