

# SwiftCon China 2016

[www.swiftconchina.com](http://www.swiftconchina.com)

SwiftCon x Think  
[www.swiftconchina.com](http://www.swiftconchina.com) [ThinkInLAMP.com](http://ThinkInLAMP.com)

# 原生移动跨平台开发工具

# Project Mirai

上海泰尼 郝培强

微博 @tinyfool

微信 30010

# 多平台移动开发现状

- 多平台开发
  - 分别开发
  - 人员配置重复
  - 产品设计复杂
  - 发布和测试周期复杂
  - 战略难以同步
- 跨平台开发
  - 各种不爽

# 跨平台开发方案

- 基于HTML 5
  - PhoneGap, Sencha Touch, AppCan
- 原生跨平台库
  - Xamarin (C#), RhoMobile (Ruby), Crossapp (C++), QT (C++)
- HTML5逻辑的原生UI的方案
  - Apache Cordova
- 环境模拟器
  - Cycada (Cider)

# 人始终是核心

- 技术以人为本
- 从人出发，再回到人
- 效率
- 懒性
- 项目的管理难度

# Project Mirai

- 缘起
- 方案设计
- 实现
- 阶段成果

# 缘起

- NextBook 引擎
- 移植到Mac

# NextBook 引擎

Video

# 类似项目

- GNUstep (Mac API) Opensource
  - run at Linux/Windows/Mac
- Cocotron (Mac API) Opensource
  - run at Windows
- Chameleon (iOS API) Opensource
  - run at Mac
- Apportable (iOS API)
  - run at Android
- StellaSDK (iOS API)
  - run at Android

# 实现

UIKit

CoreText

QuartzCore

CoreGraphics

Foundation

CoreFoundation

Objective-C Runtime

# Objective-C语言

- 语言层面
  - gnuobjc
- 多线程
  - dispatch, ffi, opengcd
- i18n
  - iconv, icu

# Runtime

- 2D引擎
  - lcms, pixman, cairo
- 图片支持
  - libpng, libjpeg, libtiff
- 字体
  - freetype, fontconfig
- XML
  - expat, libxml

# Gnustep

- Foundation
  - gnustep-base
- CoreFoundation
  - gnustep-corebase
- CoreGraphics:
  - gnustep-opal
- QuartzCore
  - GNUstep QuartzCore

# CoreText

- gnustep-opal
- glib
- harfbuzz
- gettext
- pango

# UIKit

- Chameleon

# 阶段成果

- Mac上使用Xcode编译Android程序
- UI Demo
- NextBook on Android

# Xcode 编译

The screenshot shows the Xcode interface with the following details:

- Toolbar:** Standard Xcode icons for file, paste, search, warning, and others.
- Project Navigator:** Shows the project structure:
  - BasicCairo-Android (selected)
  - My Mac
  - File
  - Test
  - Search
  - Warning
  - Document
  - Message
- Code Editor:** Displays a file named `TNViewController.m`. The code contains several green annotations:
  - Line 1: `// TNGesture`
  - Line 2: `// BasicCair`
  - Line 3: `// Created b`
  - Line 4: `// Copyright`
  - Line 5: `//`
  - Line 6: `//`
  - Line 7: `//`
  - Line 8:
  - Line 9: `#import "TNGe`