Conferencias magistrales

Este es el archivo README.md del proyecto de GitHub https://github.com/lzwjava/Keynotes.

Apuntes:

- Operaciones avanzadas y principios de Git
- WebSocket
- UnitTest
- Tecnología de transmisión en vivo sin reservas

Bienvenido a compartir, si tienes alguna pregunta, por favor, abre un issue, y responderé lo antes posible.

Live

Tecnología de transmisión en vivo sin reservas

En el directorio Live.

Git

2016.5.3 Transmisión en vivo de Douyu

WebSocket

2016.4.23 Tecnología de transmisión en vivo de Douyu

62 páginas

UnitTest

2015.12.20 Apuntes transmitidos en vivo en Douyu TV, sobre pruebas unitarias, automatización, herramientas útiles, etc. Video: http://reviewcode.cn/video.html?videoId=2

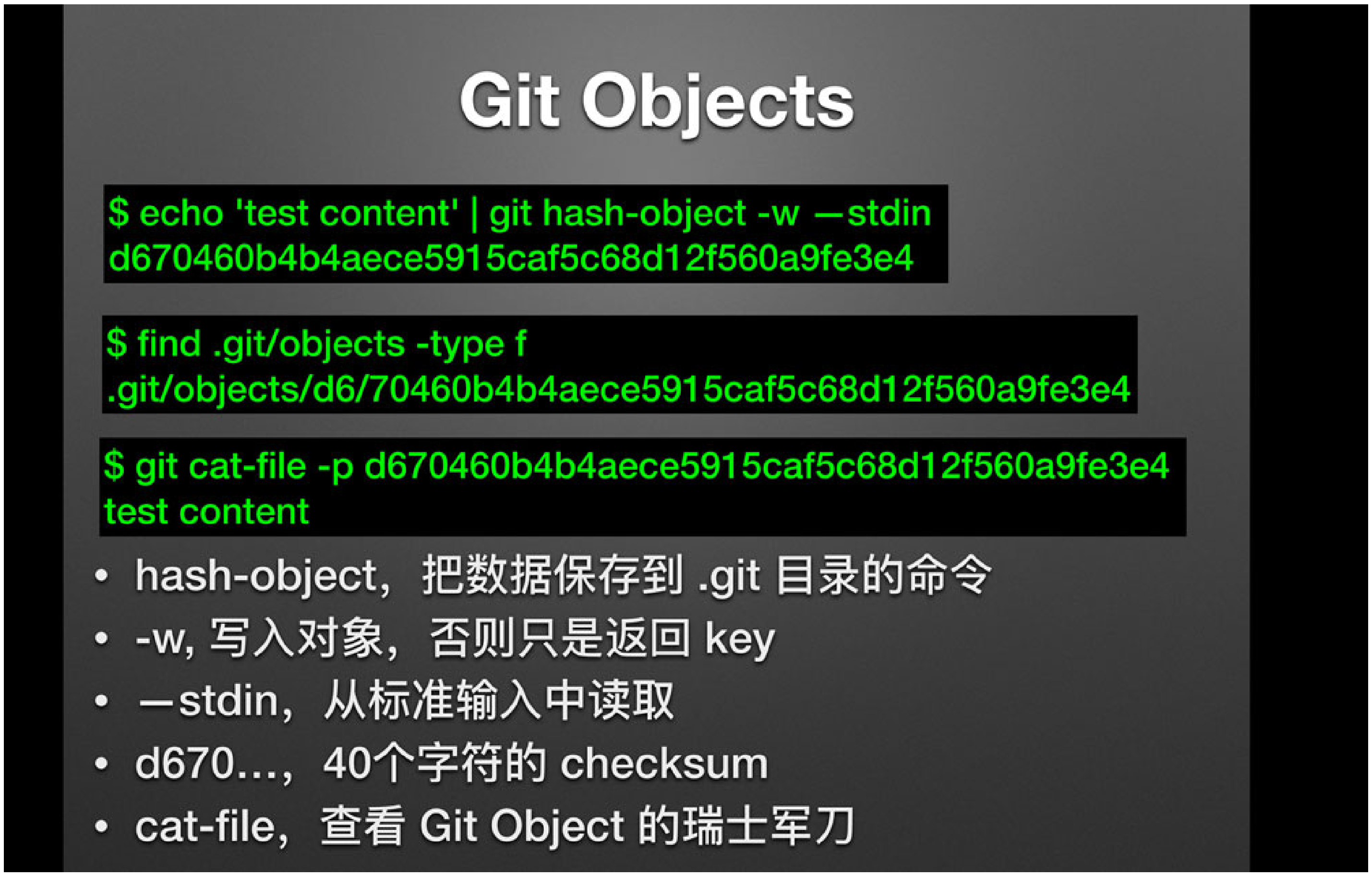
40 páginas

…

Git 高级操作和原理

李智维

Figure 1: qq20160503-0 2x



Git Objects

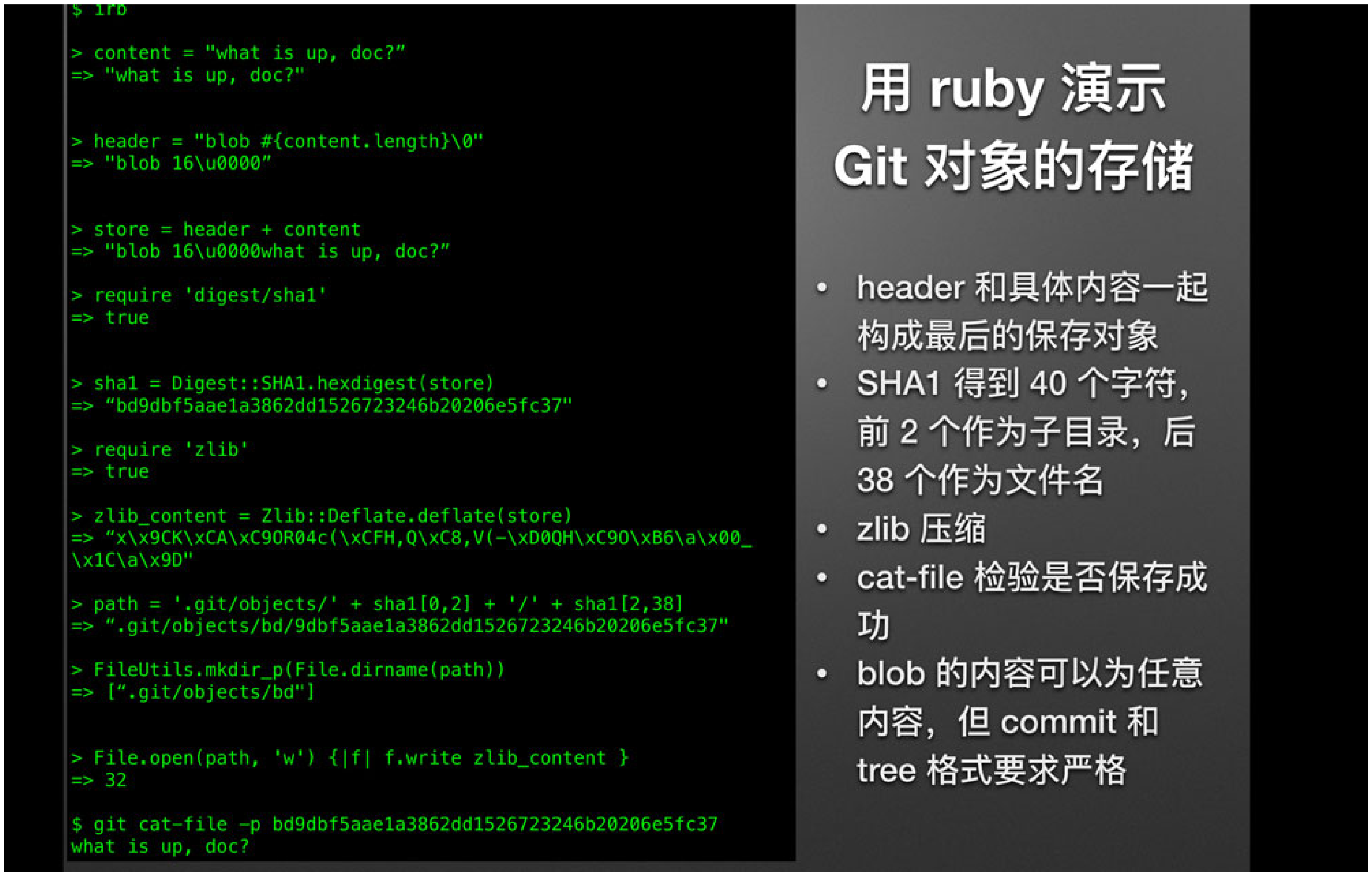
```
$ echo 'test content' | git hash-object -w —stdin
d670460b4b4aece5915caf5c68d12f560a9fe3e4
```

```
$ find .git/objects -type f
.git/objects/d6/70460b4b4aece5915caf5c68d12f560a9fe3e4
```

```
$ git cat-file -p d670460b4b4aece5915caf5c68d12f560a9fe3e4
test content
```

- hash-object，把数据保存到 .git 目录的命令
- -w, 写入对象，否则只是返回 key
- —stdin，从标准输入中读取
- d670…，40个字符的 checksum
- cat-file，查看 Git Object 的瑞士军刀

Figure 2: qq20160502-0 2x



```
$ irb

> content = "what is up, doc?"
=> "what is up, doc?"

> header = "blob #{content.length}\0"
=> "blob 16\u0000"

> store = header + content
=> "blob 16\u0000what is up, doc?"

> require 'digest/sha1'
=> true

> sha1 = Digest::SHA1.hexdigest(store)
=> "bd9dbf5aae1a3862dd1526723246b20206e5fc37"

> require 'zlib'
=> true

> zlib_content = Zlib::Deflate.deflate(store)
=> "x\x9CK\xCA\xC9OR04c(\xCFH,Q\xC8,V(-\xD0QH\xC9O\xB6\a\x00_
\x1C\a\x9D"

> path = '.git/objects/' + sha1[0,2] + '/' + sha1[2,38]
=> ".git/objects/bd/9dbf5aae1a3862dd1526723246b20206e5fc37"

> FileUtils.mkdir_p(File.dirname(path))
=> [".git/objects/bd"]

> File.open(path, 'w') {|f| f.write zlib_content }
=> 32

$ git cat-file -p bd9dbf5aae1a3862dd1526723246b20206e5fc37
what is up, doc?
```

用 ruby 演示 Git 对象的存储

- header 和具体内容一起构成最后的保存对象
- SHA1 得到 40 个字符，前 2 个作为子目录，后 38 个作为文件名
- zlib 压缩
- cat-file 检验是否保存成功
- blob 的内容可以为任意内容，但 commit 和 tree 格式要求严格

Figure 3: qq20160502-3 2x

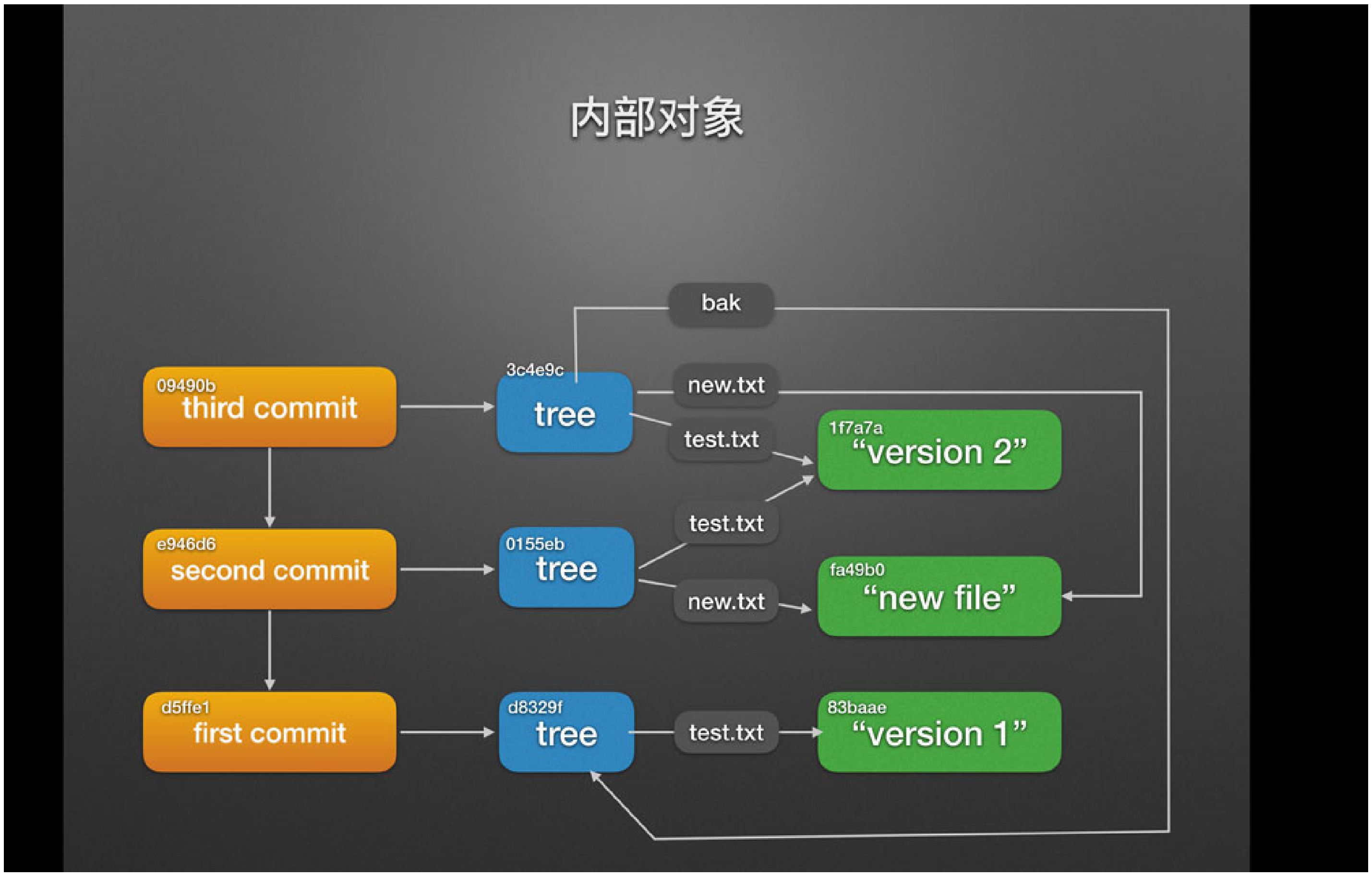


Figure 4: qq20160502-2 2x

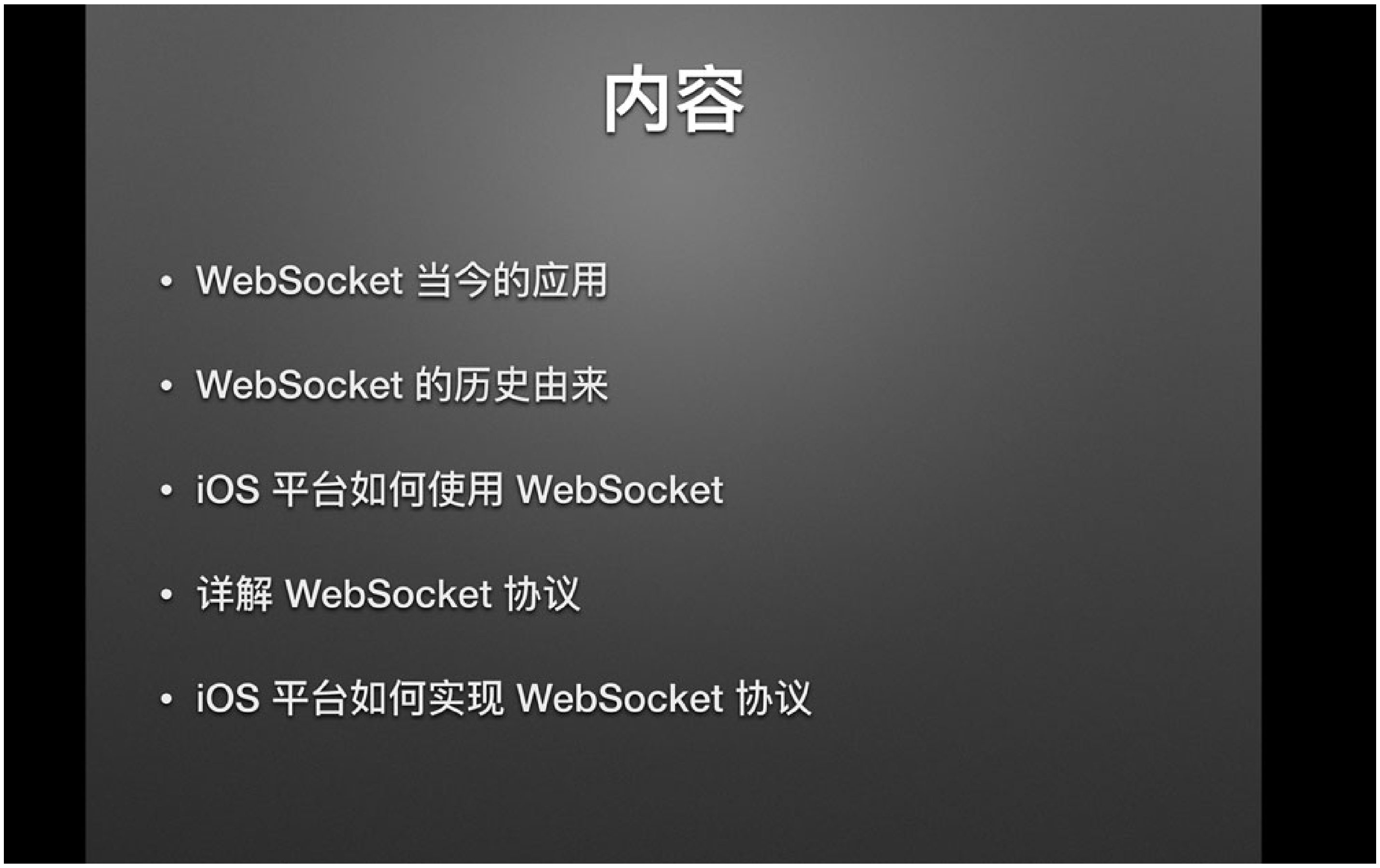
讲讲 WebSocket

李智维
2016.4.23

Figure 5: qq20160423-1 2x

Crédito

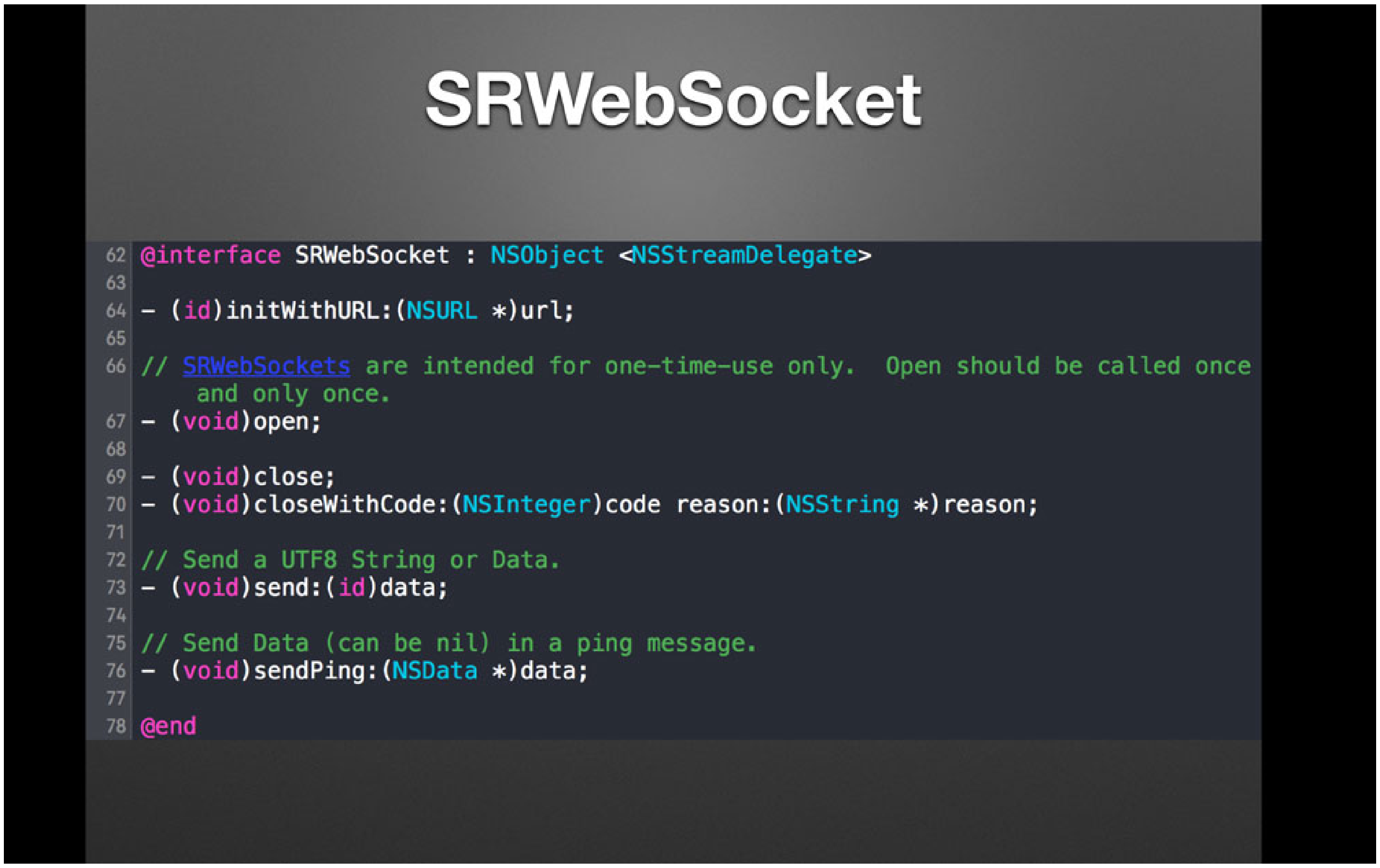
Gracias a Yanzu, ufosky, tang3w, sunng87, iOS Programmer, Mr. Ran. Gracias al CTO de LeanCloud por permitirme hablar sobre el proceso de pruebas internas.



内容

- WebSocket 当今的应用
- WebSocket 的历史由来
- iOS 平台如何使用 WebSocket
- 详解 WebSocket 协议
- iOS 平台如何实现 WebSocket 协议

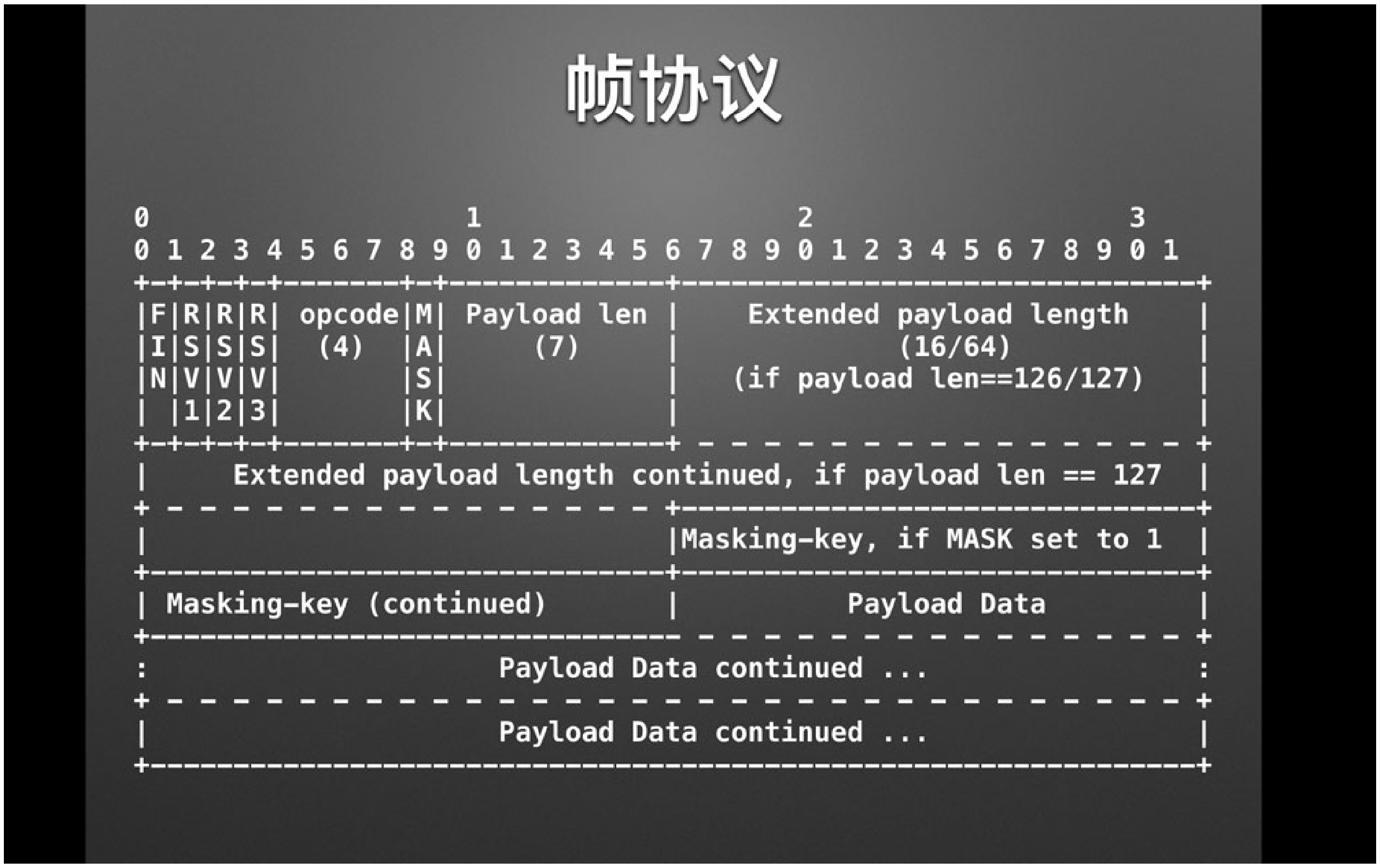
Figure 6: qq20160423-2 2x



SRWebSocket

```
@interface SRWebSocket : NSObject <NSStreamDelegate>

- (id)initWithURL:(NSURL *)url;

// SRWebSockets are intended for one-time-use only.  Open should be called once
    and only once.
- (void)open;

- (void)close;
- (void)closeWithCode:(NSInteger)code reason:(NSString *)reason;

// Send a UTF8 String or Data.
- (void)send:(id)data;

// Send Data (can be nil) in a ping message.
- (void)sendPing:(NSData *)data;

@end
```

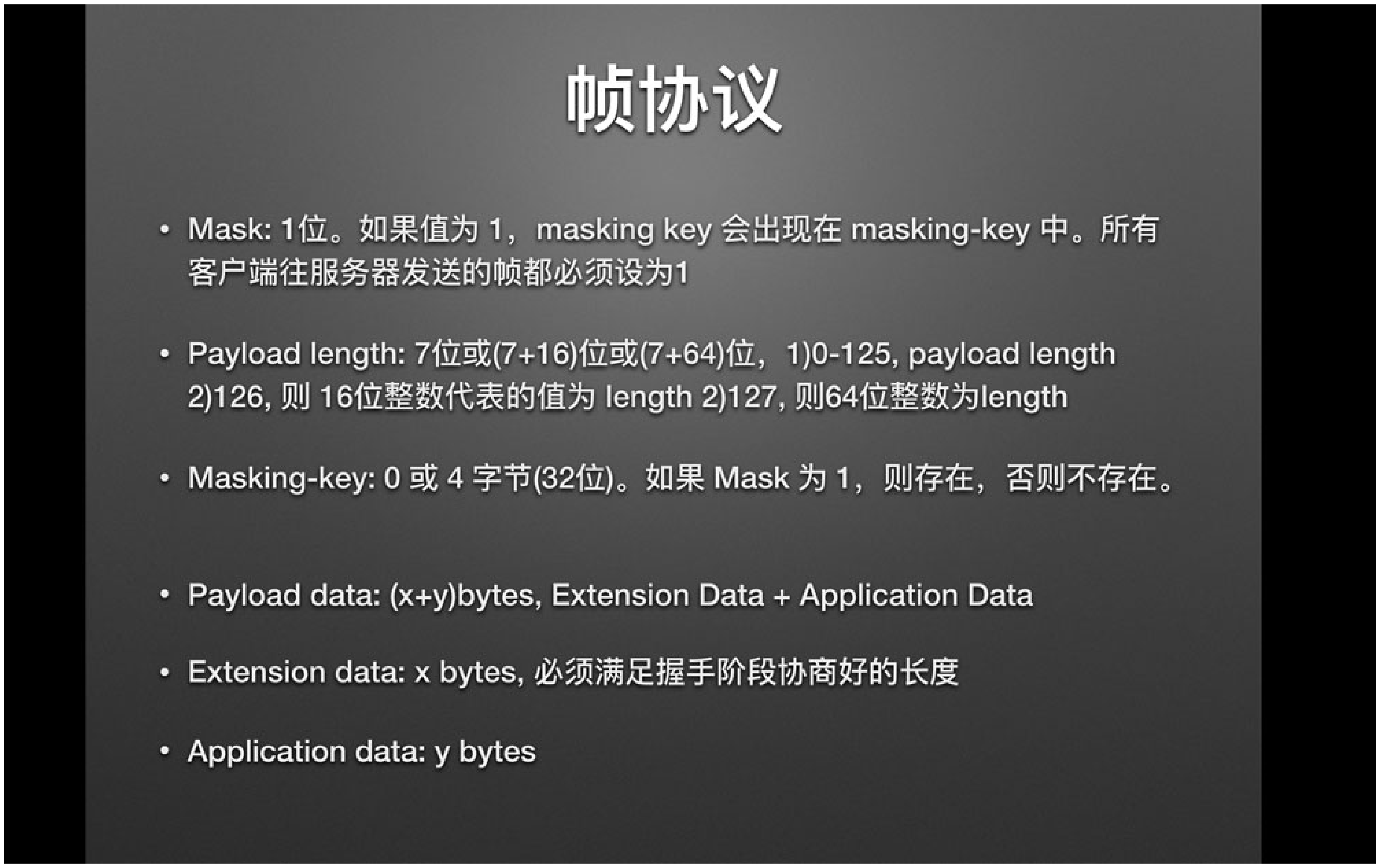
Figure 7: qq20160423-6 2x



帧协议

```
 0                   1                   2                   3
 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+-+-+-+-------+-+-------------+-------------------------------+
|F|R|R|R| opcode|M| Payload len |    Extended payload length    |
|I|S|S|S|  (4)  |A|     (7)     |             (16/64)           |
|N|V|V|V|       |S|             |   (if payload len==126/127)   |
| |1|2|3|       |K|             |                               |
+-+-+-+-+-------+-+-------------+ - - - - - - - - - - - - - - - +
|     Extended payload length continued, if payload len == 127  |
+ - - - - - - - - - - - - - - - +-------------------------------+
|                               |Masking-key, if MASK set to 1  |
+-------------------------------+-------------------------------+
| Masking-key (continued)       |          Payload Data         |
+-------------------------------- - - - - - - - - - - - - - - - +
:                     Payload Data continued ...                :
+ - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - +
|                     Payload Data continued ...                |
+---------------------------------------------------------------+
```

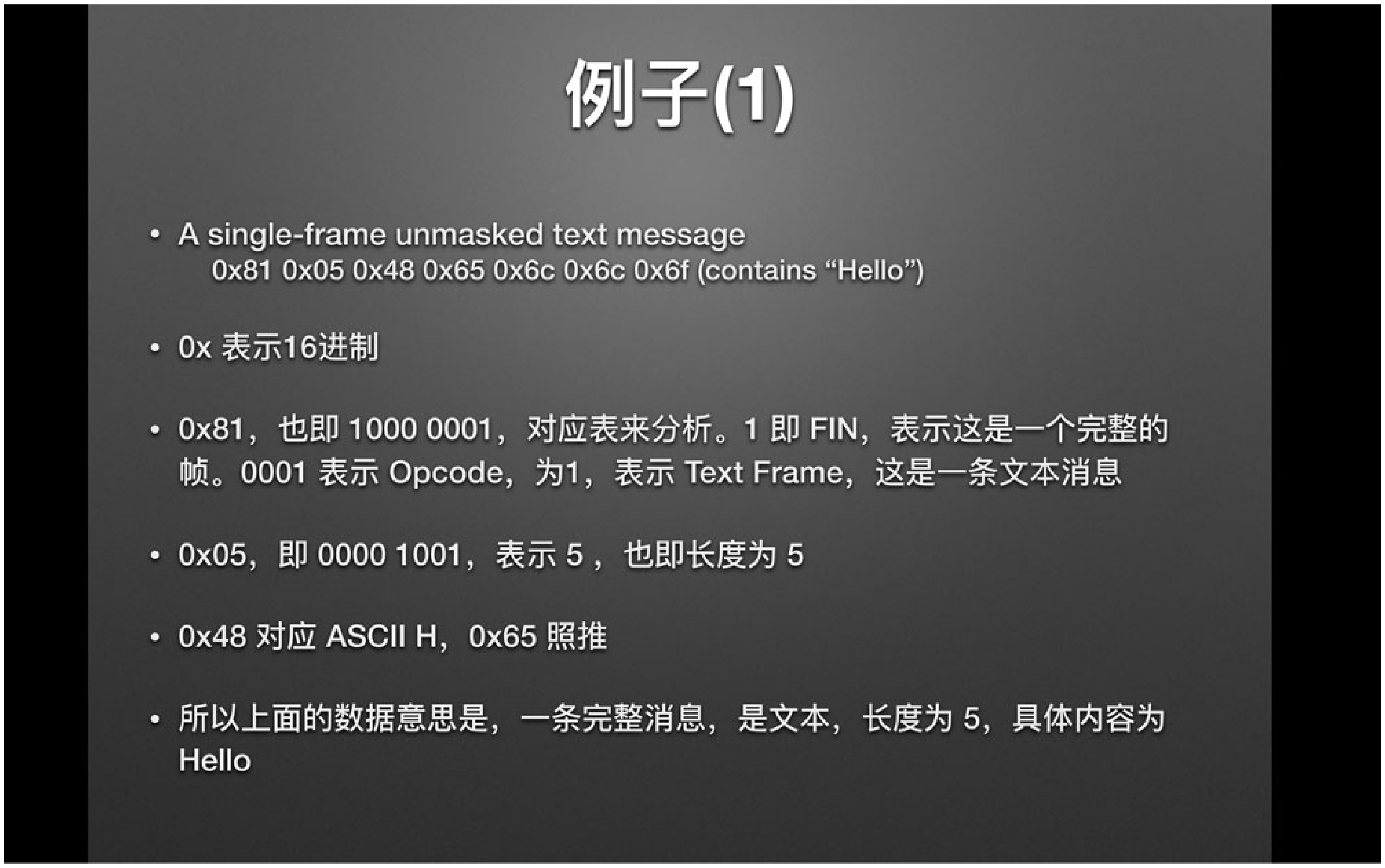
Figure 8: qq20160423-4 2x



帧协议

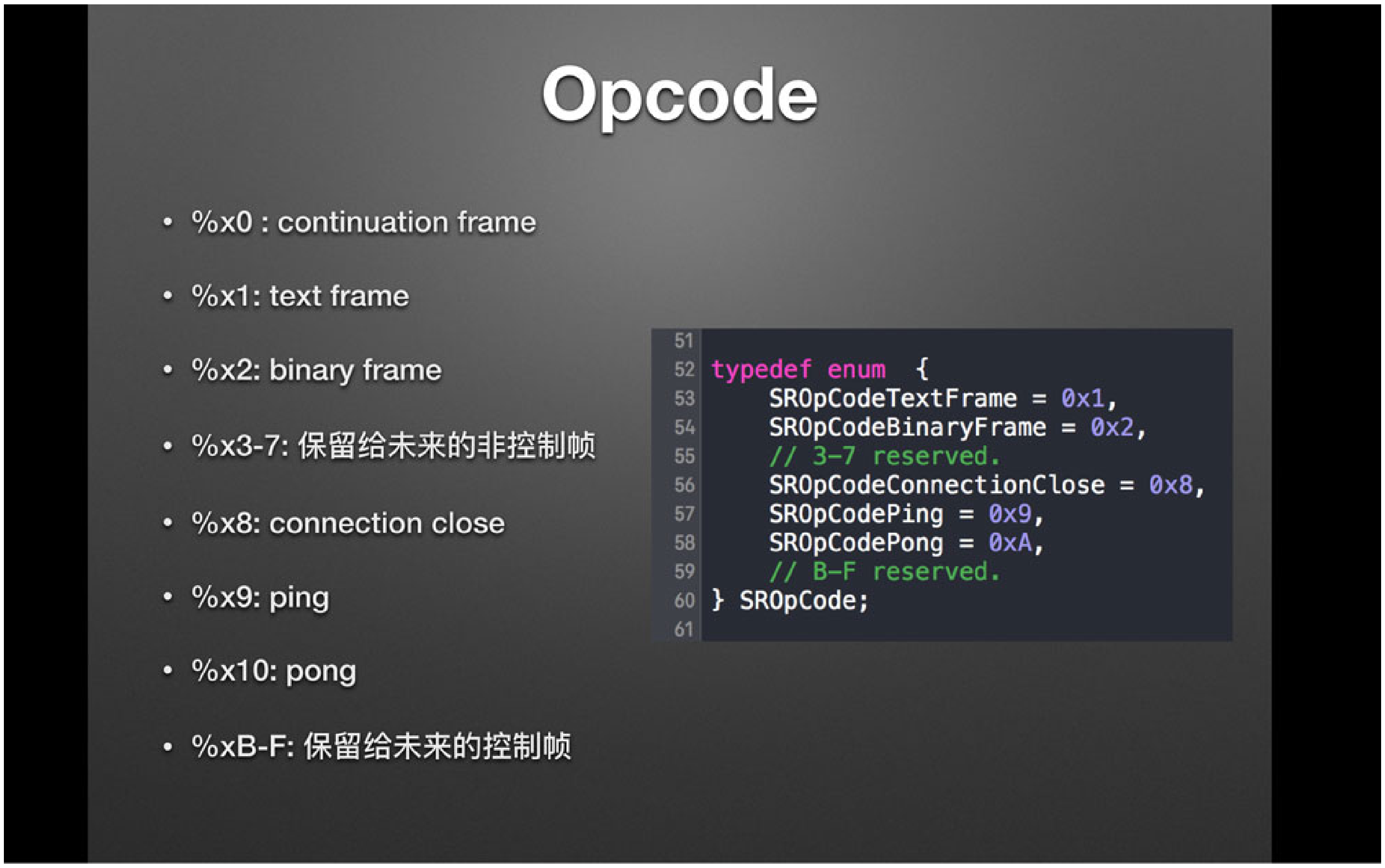
- Mask: 1位。如果值为 1，masking key 会出现在 masking-key 中。所有客户端往服务器发送的帧都必须设为1
- Payload length: 7位或(7+16)位或(7+64)位，1)0-125, payload length 2)126, 则 16位整数代表的值为 length 2)127, 则64位整数为length
- Masking-key: 0 或 4 字节(32位)。如果 Mask 为 1，则存在，否则不存在。
- Payload data: (x+y)bytes, Extension Data + Application Data
- Extension data: x bytes, 必须满足握手阶段协商好的长度
- Application data: y bytes

Figure 9: qq20160423-5 2x


例子(1)

- A single-frame unmasked text message
  0x81 0x05 0x48 0x65 0x6c 0x6c 0x6f (contains “Hello”)
- 0x 表示16进制
- 0x81，也即 1000 0001，对应表来分析。1 即 FIN，表示这是一个完整的帧。0001 表示 Opcode，为1，表示 Text Frame，这是一条文本消息
- 0x05，即 0000 1001，表示 5，也即长度为 5
- 0x48 对应 ASCII H，0x65 照推
- 所以上面的数据意思是，一条完整消息，是文本，长度为 5，具体内容为 Hello

Figure 10: qq20160424-0 2x



Opcode

- %x0 : continuation frame
- %x1: text frame
- %x2: binary frame
- %x3-7: 保留给未来的非控制帧
- %x8: connection close
- %x9: ping
- %x10: pong
- %xB-F: 保留给未来的控制帧

```
typedef enum  {
    SROpCodeTextFrame = 0x1,
    SROpCodeBinaryFrame = 0x2,
    // 3-7 reserved.
    SROpCodeConnectionClose = 0x8,
    SROpCodePing = 0x9,
    SROpCodePong = 0xA,
    // B-F reserved.
} SROpCode;
```

Figure 11: qq20160423-8 2x

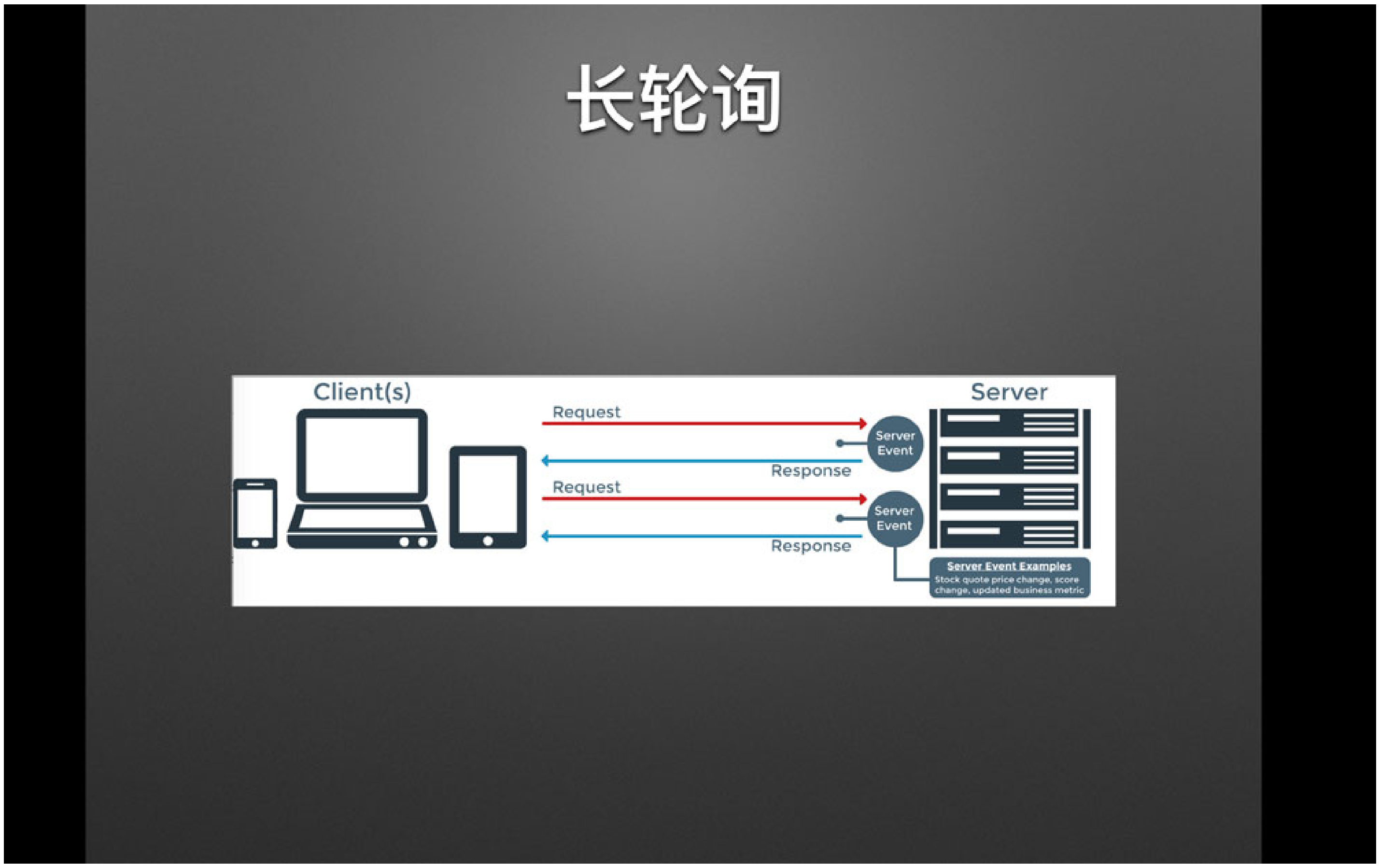
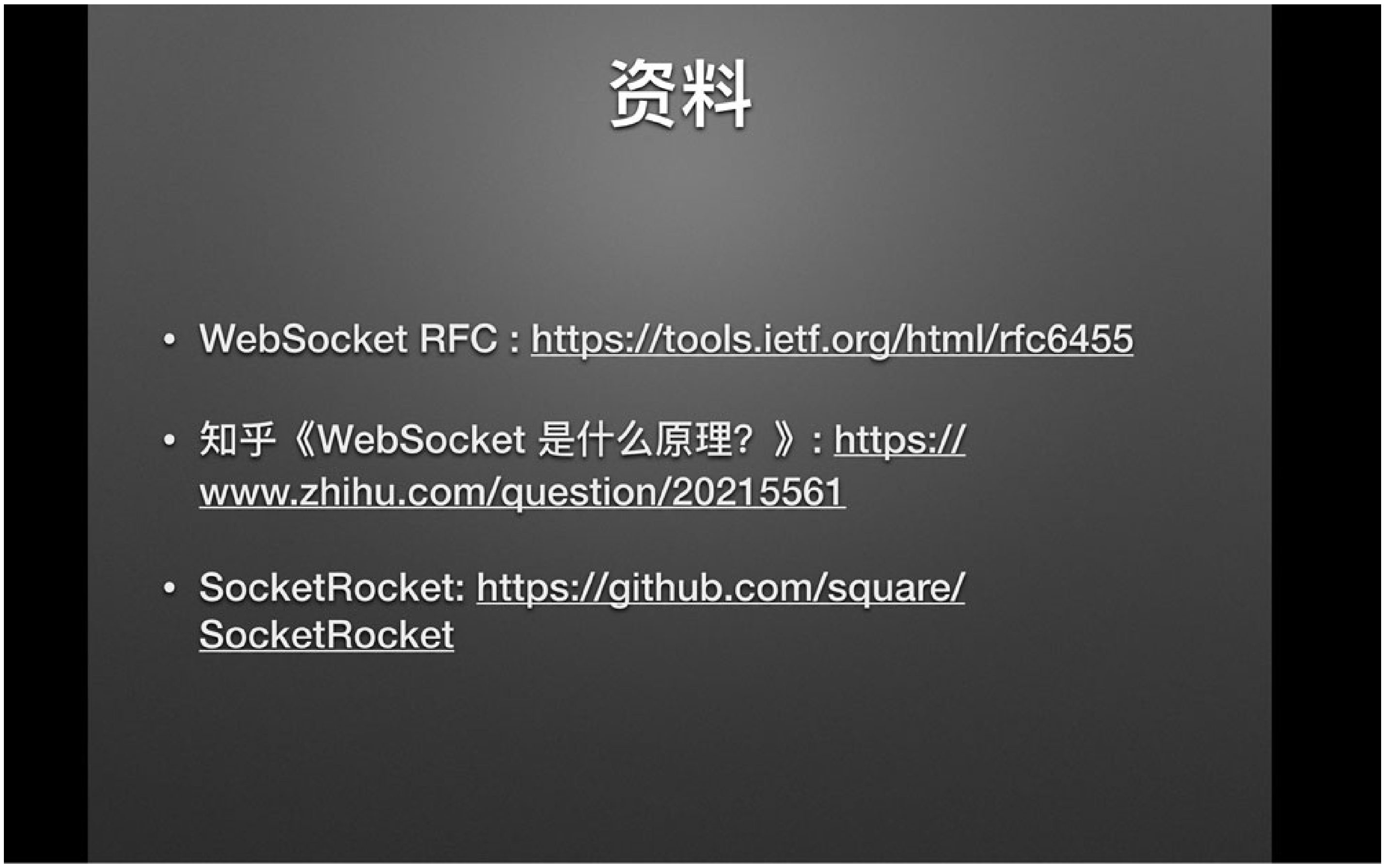


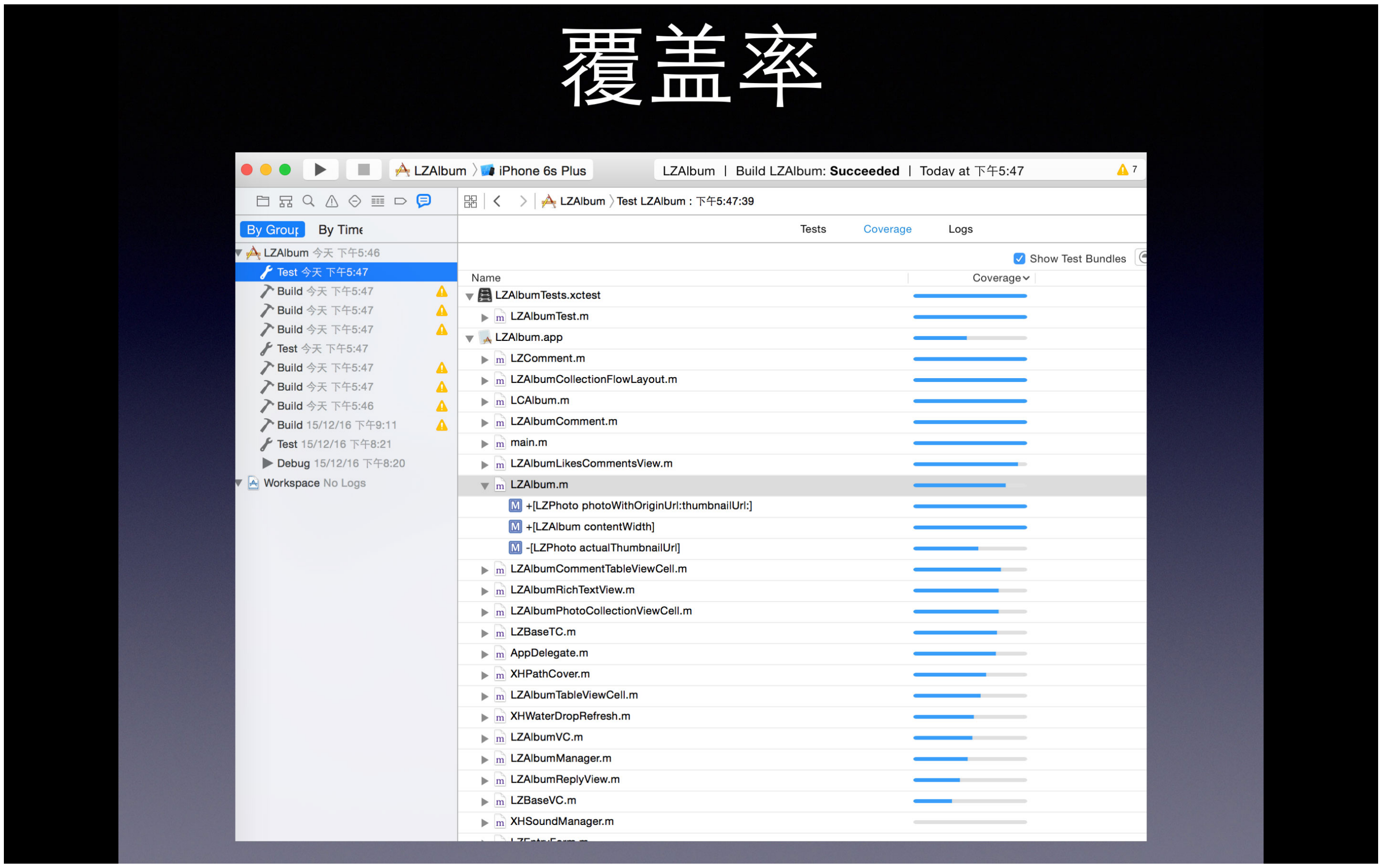
Figure 12: qq20160423-3 2x



资料

- WebSocket RFC : https://tools.ietf.org/html/rfc6455
- 知乎《WebSocket 是什么原理？》: https://www.zhihu.com/question/20215561
- SocketRocket: https://github.com/square/SocketRocket

Figure 13: qq20160423-9 2x



覆盖率

LZAlbum 〉 iPhone 6s Plus | LZAlbum | Build LZAlbum: **Succeeded** | Today at 下午5:47 ⚠ 7

LZAlbum 〉 Test LZAlbum : 下午5:47:39

By Group | By Time

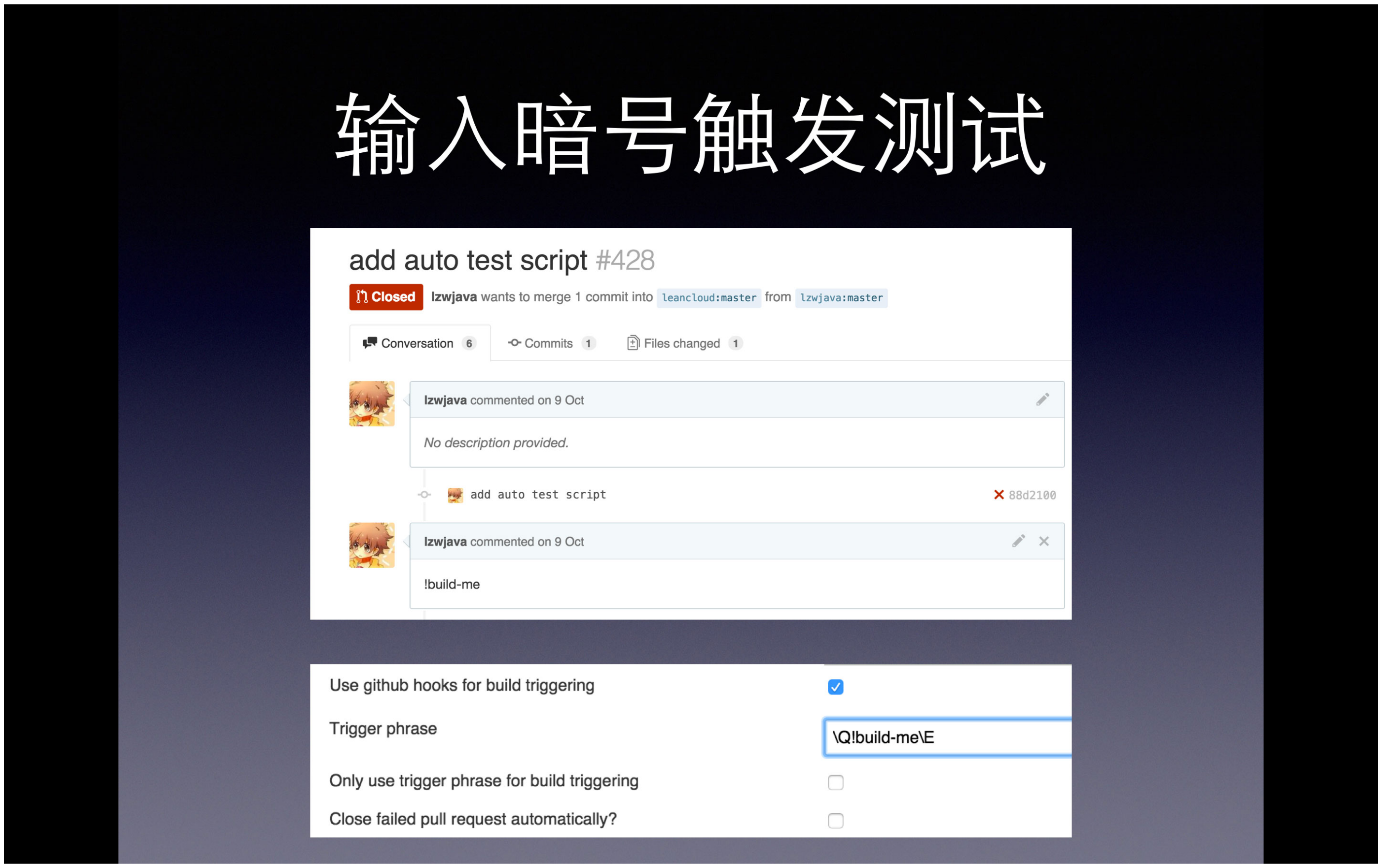
Tests | Coverage | Logs

- LZAlbum 今天 下午5:46
  - Test 今天 下午5:47
  - Build 今天 下午5:47 ⚠
  - Build 今天 下午5:47 ⚠
  - Build 今天 下午5:47 ⚠
  - Test 今天 下午5:47
  - Build 今天 下午5:47 ⚠
  - Build 今天 下午5:47 ⚠
  - Build 今天 下午5:46 ⚠
  - Build 15/12/16 下午9:11 ⚠
  - Test 15/12/16 下午8:21
  - Debug 15/12/16 下午8:20
- Workspace No Logs

☑ Show Test Bundles

```
Name                                             Coverage
▼ LZAlbumTests.xctest
  ▶ LZAlbumTest.m
▼ LZAlbum.app
  ▶ LZComment.m
  ▶ LZAlbumCollectionFlowLayout.m
  ▶ LCAlbum.m
  ▶ LZAlbumComment.m
  ▶ main.m
  ▶ LZAlbumLikesCommentsView.m
  ▼ LZAlbum.m
      M +[LZPhoto photoWithOriginUrl:thumbnailUrl:]
      M +[LZAlbum contentWidth]
      M -[LZPhoto actualThumbnailUrl]
  ▶ LZAlbumCommentTableViewCell.m
  ▶ LZAlbumRichTextView.m
  ▶ LZAlbumPhotoCollectionViewCell.m
  ▶ LZBaseTC.m
  ▶ AppDelegate.m
  ▶ XHPathCover.m
  ▶ LZAlbumTableViewCell.m
  ▶ XHWaterDropRefresh.m
  ▶ LZAlbumVC.m
  ▶ LZAlbumManager.m
  ▶ LZAlbumReplyView.m
  ▶ LZBaseVC.m
  ▶ XHSoundManager.m
```

Figure 14: key1



输入暗号触发测试

add auto test script #428

Closed lzwjava wants to merge 1 commit into `leancloud:master` from `lzwjava:master`

Conversation 6 · Commits 1 · Files changed 1

lzwjava commented on 9 Oct

No description provided.

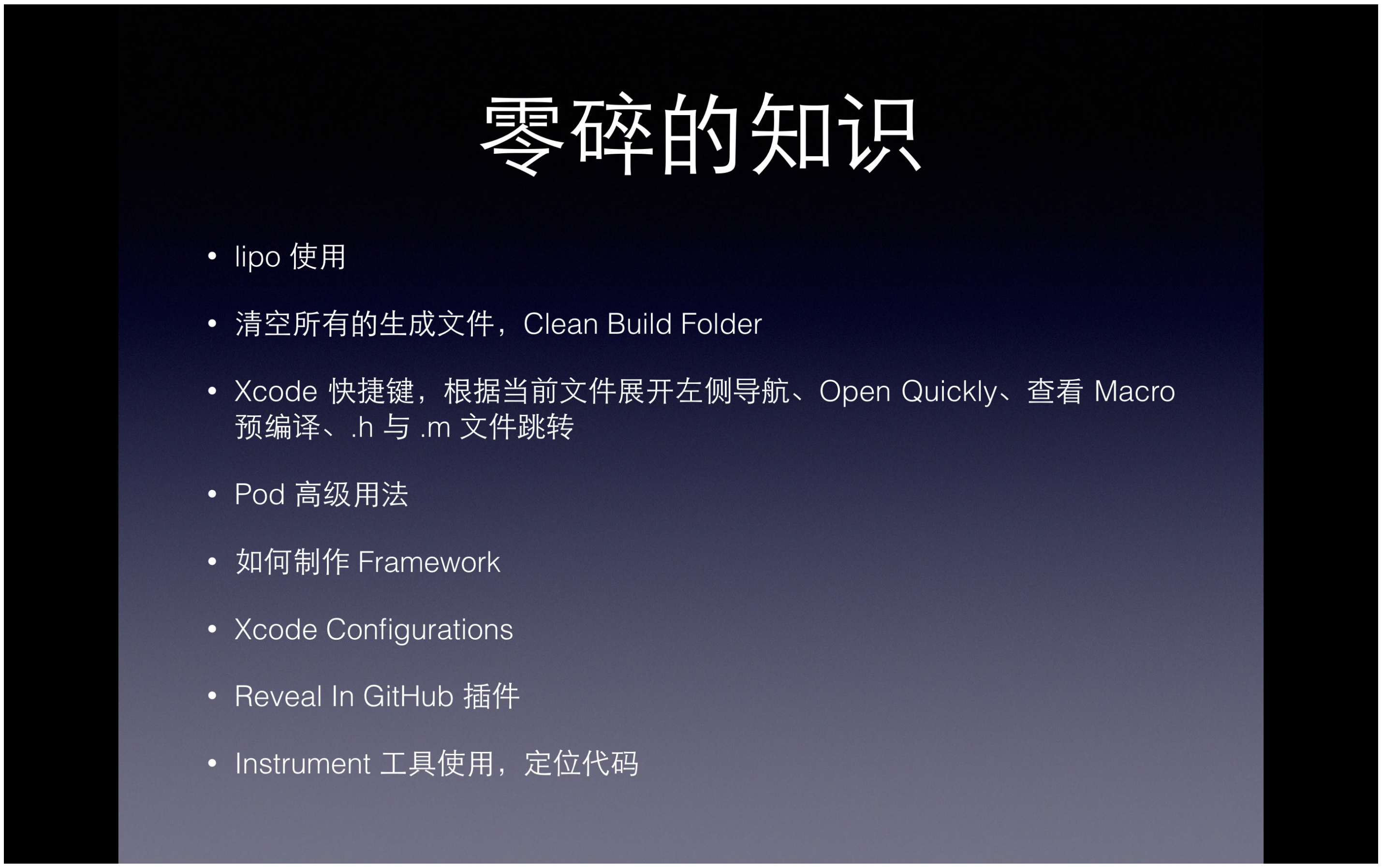
`add auto test script` ✗ 88d2100

lzwjava commented on 9 Oct

!build-me

Use github hooks for build triggering	✓
Trigger phrase	\Q!build-me\E
Only use trigger phrase for build triggering	☐
Close failed pull request automatically?	☐

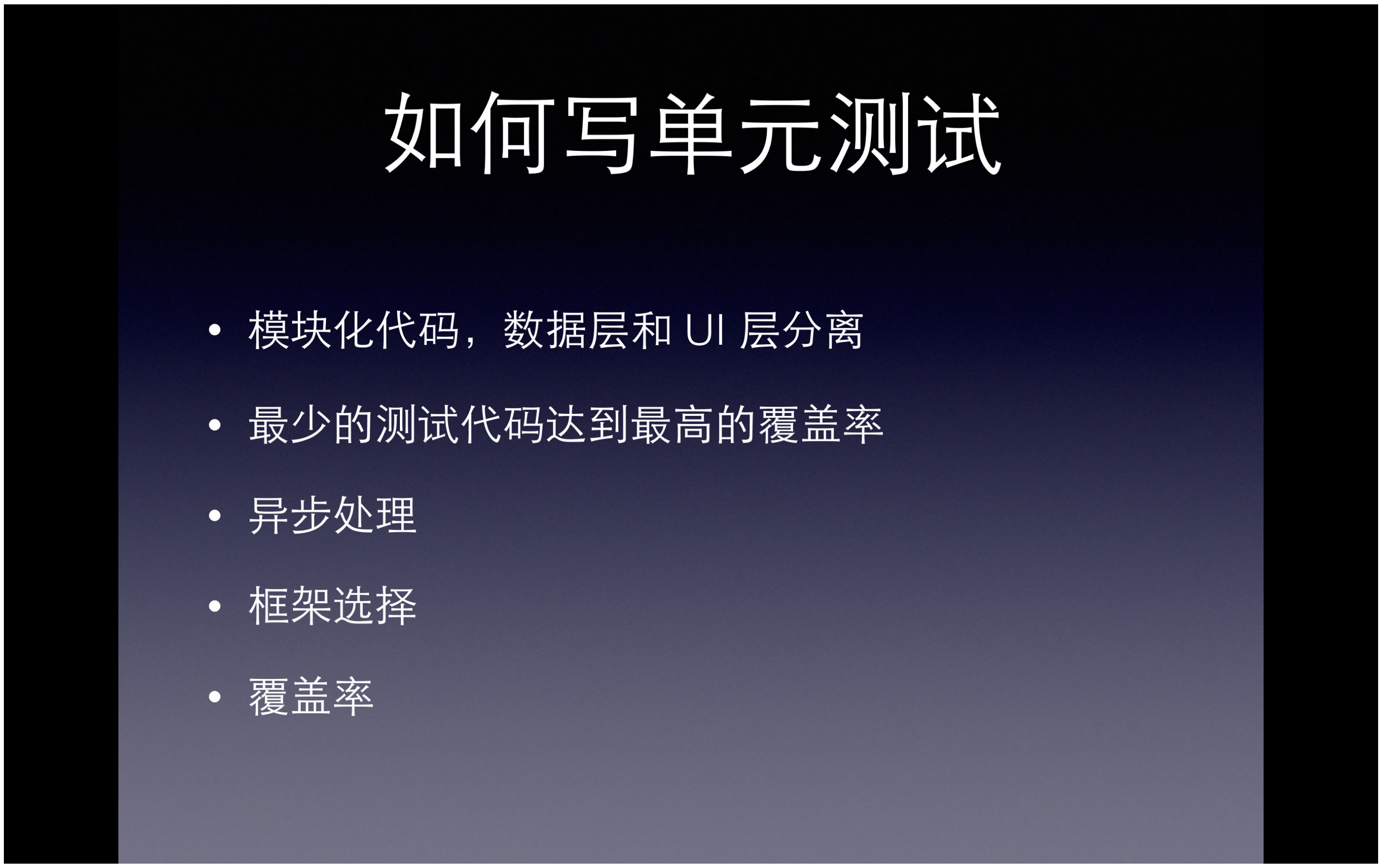
Figure 15: key2



零碎的知识

- lipo 使用
- 清空所有的生成文件，Clean Build Folder
- Xcode 快捷键，根据当前文件展开左侧导航、Open Quickly、查看 Macro 预编译、.h 与 .m 文件跳转
- Pod 高级用法
- 如何制作 Framework
- Xcode Configurations
- Reveal In GitHub 插件
- Instrument 工具使用，定位代码

Figure 16: key4



如何写单元测试

- 模块化代码，数据层和 UI 层分离
- 最少的测试代码达到最高的覆盖率
- 异步处理
- 框架选择
- 覆盖率

Figure 17: key5