iOS App Development at DESY

TINE User Meeting
06/07/2012

Frank Mayet

Outline

- Introduction

- TINE & iOS

- iOS Development

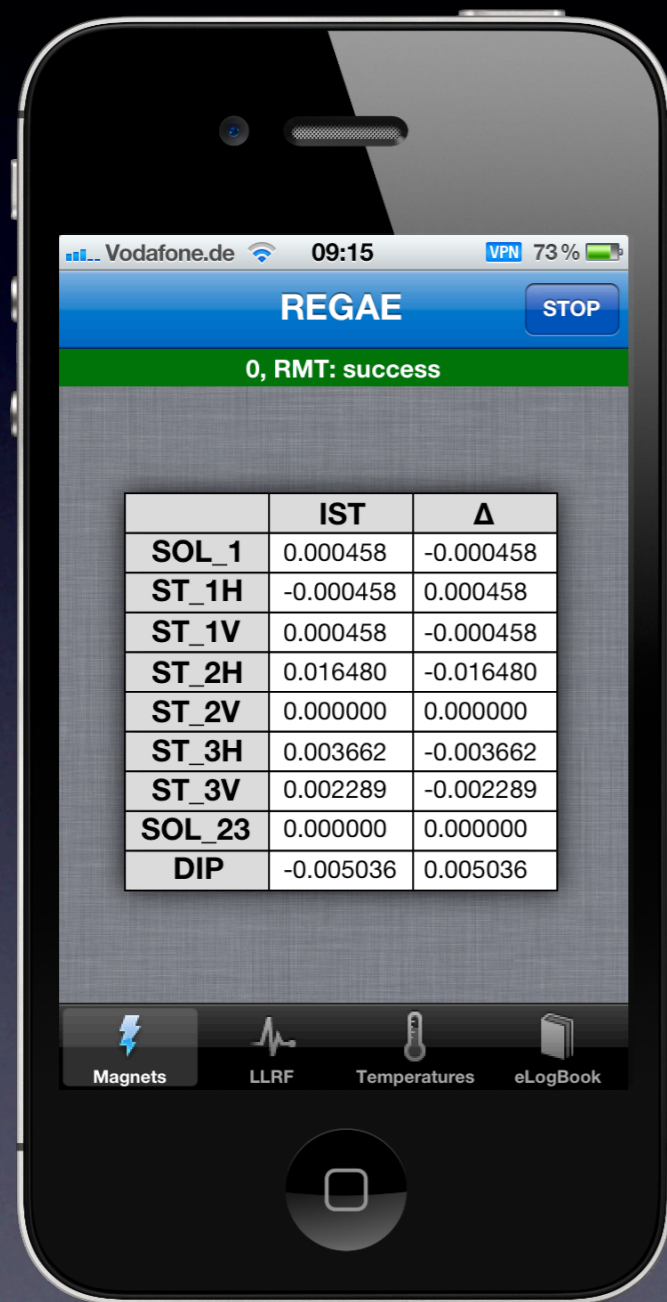- iOS App Deployment
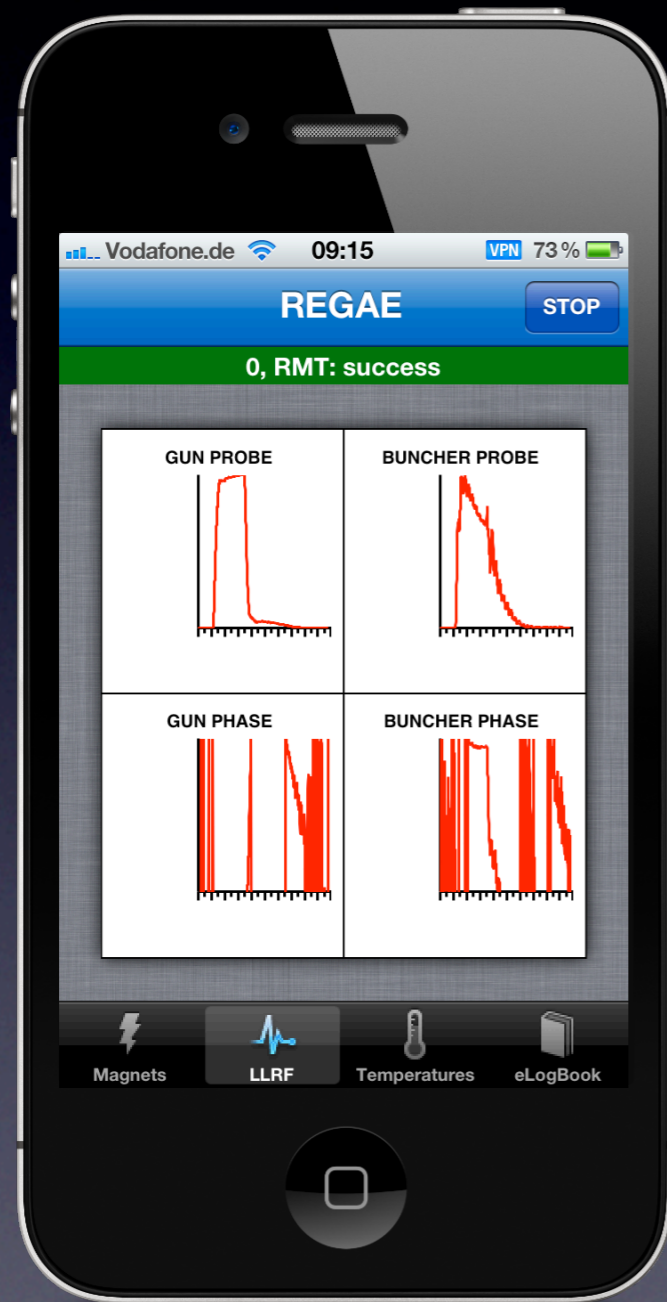
Introduction

The REGAE iPhone App

- "proof of concept"

- reads out REGAE machine data

- uses TINE C source 4.2.10

- native!

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The REGAE iPhone App

Gun Cavity	46.402576
Buncher Cavity	37.874969
Tunnel	26.662687
Pre Amplifier	40.894058
Modulator Room	32.873112
Outside	19.910328

REGAE — STOP

0, RMT: success

Magnets   LLRF   Temperatures   eLogBook

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The REGAE iPhone App

✓ fast

✓ efficient

✓ easy access to OS features

- gesture recognizers

- push notifications

- ...

✓ easy access to hardware features

- device rotation

- location services (geo fencing...)

- ...

TINE & iOS

some ideas

TINE & iOS

- native version of "Archive Viewer"

- iOS versions of panels

  - alarms and event via push-notifications

- panel design toolbox for the iPad

  - create your own control/monitoring panels

  - assign controls using standard TINE addresses

  - assign "push-notification outlets" to certain events

  - grab video streams

  - iOS 6: restrict devices to a single app (*kiosk mode*)

  - ...

- native eLogBook apps
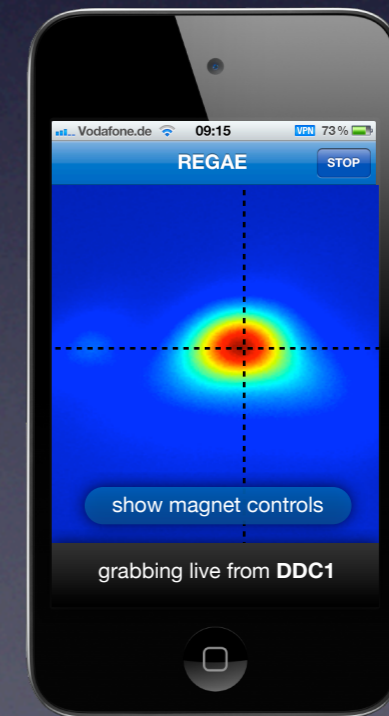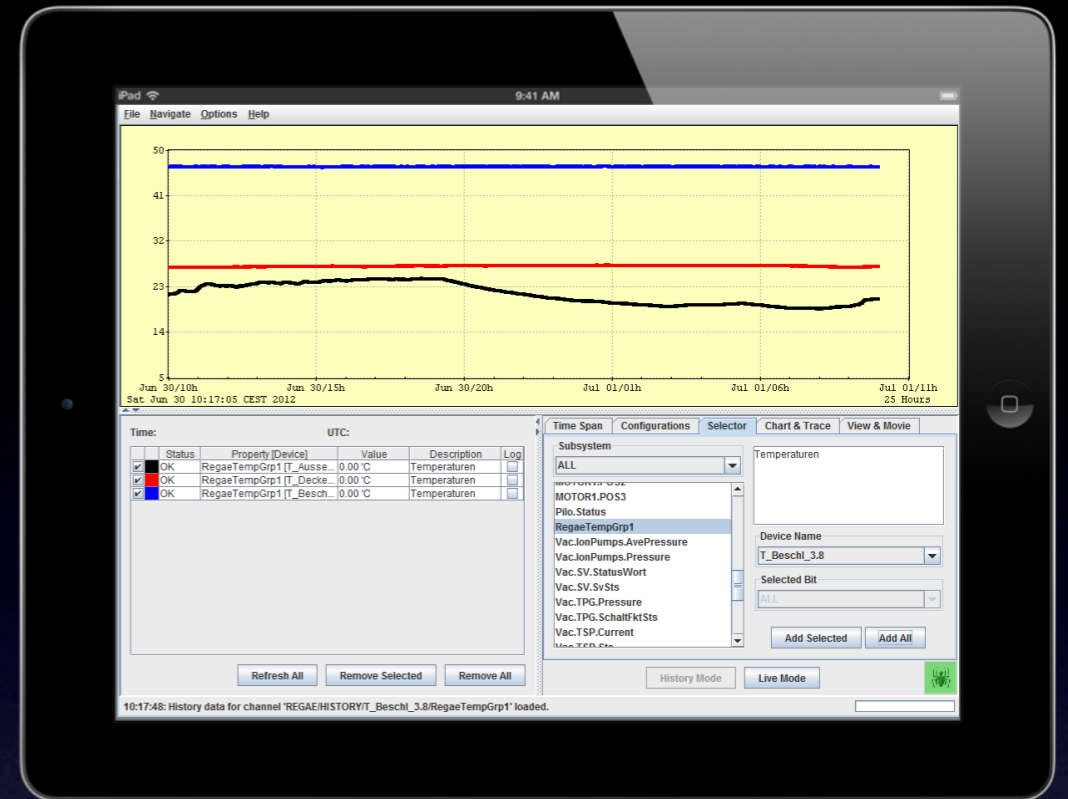
iOS Development

a (very) short primer

iOS Development

current OS	iOS 5.1.1
IDE	Xcode 4.3
language	Objective-C 2.0

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Position Jul 2012	Position Jul 2011	Delta in Position	Programming Language	Ratings Jul 2012	Delta Jul 2011	Status
1	2	⬆	C	18.331%	+1.05%	A
2	1	⬇	Java	16.087%	-3.16%	A
3	6	⬆⬆⬆	Objective-C	9.335%	+4.15%	A
4	3	⬇	C++	9.118%	+0.10%	A
			C#			

REGAE › iPhone 5.1 Simulator

Run Stop Scheme Breakpoints

Finished running REGAE on iPhone 5.1 Simulator
Project ⚠62

Editor View Organizer

REGAE › REGAE › FMLogBookViewController.m › -segmentedControlPressed:

```objc
//
//  FMLogBookViewController.m
//  REGAE
//
//  Created by Frank Mayet on 16.05.12.
//  Copyright (c) 2012 Uni-Hamburg / Allthirds. All rights reserved.
//

#import "FMLogBookViewController.h"

@interface FMLogBookViewController ()

@end

@implementation FMLogBookViewController

@synthesize webView, segmentedControl, refreshButton;

- (id)initWithNibName:(NSString *)nibNameOrNil bundle:(NSBundle *)nibBundleOrNil
{
    self = [super initWithNibName:nibNameOrNil bundle:nibBundleOrNil];
    if (self) {
        self.title = NSLocalizedString(@"eLogBook", @"eLogBook");
        self.tabBarItem.image = [UIImage imageNamed:@"96-book"];
    }
    return self;
}

- (void)viewDidLoad
{
    [super viewDidLoad];

    webView.scalesPageToFit = YES;

    NSString *urlAddress = @"http://ttfinfo.desy.de/REGAEelog/index.jsp";

    //Create a URL object.
    NSURL *url = [NSURL URLWithString:urlAddress];

    //URL Requst Object
    NSURLRequest *requestObj = [NSURLRequest requestWithURL:url];

    //Load the request in the UIWebView.
    [webView loadRequest:requestObj];

    // Do any additional setup after loading the view from its nib.
}

- (void)viewDidUnload
{
    [super viewDidUnload];
    // Release any retained subviews of the main view.
    // e.g. self.myOutlet = nil;
}

- (BOOL)shouldAutorotateToInterfaceOrientation:(UIInterfaceOrientation)interfaceOrientation
{
    return (interfaceOrientation == UIInterfaceOrientationPortrait);
}

-(IBAction)reloadButtonPressed:(id)sender {

    [webView reload];

}

-(IBAction)segmentedControlPressed:(UISegmentedControl *)sender {

    switch (sender.selectedSegmentIndex) {
        case 0:

            [webView goBack];

            break;
```

Quick Help

FMSecondViewController : UIViewController

Name: UIViewController

Availability: iOS (2.0 and later)

Abstract: The UIViewController class provides the fundamental view-management model for all iOS apps. You rarely instantiate UIViewController objects directly. Instead, you instantiate subclasses of the UIViewController class based on the specific task each subclass performs. A view controller manages a set of views that make up a portion of your app's user interface. As part of the controller layer of your app, a view controller coordinates its efforts with model objects and other controller objects—so your app controllers—so your app interface.

Carrier 10:57 AM

REGAE Poll

STATUS

	IST	Δ
SOL_1	-	-
ST_1H	-	-
ST_1V	-	-
ST_2H	-	-
ST_2V	-	-
ST_3H	-	-
ST_3V	-	-
SOL_23	-	-
DIP	-	-

Magnets LLRF Temperatures eLogBook

Project Navigator:

REGAE — 1 target, iOS SDK 5.1
- Default.png
- Default@2x.png
- logodesy.png
- logodesy@2x.png
- REGAE
  - CorePlot
  - FMAppDelegate.h
  - FMAppDelegate.m
  - FMFirstViewController.h
  - FMFirstViewController.m
  - FMSecondViewController.h
  - FMSecondViewController.m
  - FMThirdViewController.h
  - FMThirdViewController.m
  - FMLogBookViewController.h
  - FMLogBookViewController.m
  - FMLogBookViewController.xib
  - FMFirstViewController.xib
  - FMSecondViewController.xib
  - FMThirdViewController.xib
  - Images
    - REGAE_TempGrid.png
    - REGAE_TempGrid@2x.png
    - REGAE_LLRFGrid.png
    - REGAE_LLRFGrid@2x.png
    - 96-book.png
    - 93-thermometer.png
    - 77-ekg.png
    - 64-zap.png
    - REGAE_MagnetGrid.png
    - REGAE_MagnetGrid@2x.png
  - Supporting Files
    - REGAE-Info.plist
    - InfoPlist.strings
    - main.m
    - REGAE-Prefix.pch
  - Frameworks
  - Products
    - REGAE.app
- CorePlot-CocoaTouch.xcodeproj — 3 targets, iOS SDK 5.1
- TINELib.xcodeproj — 1 target, iOS SDK 5.1

iOS Development

✓ Mac
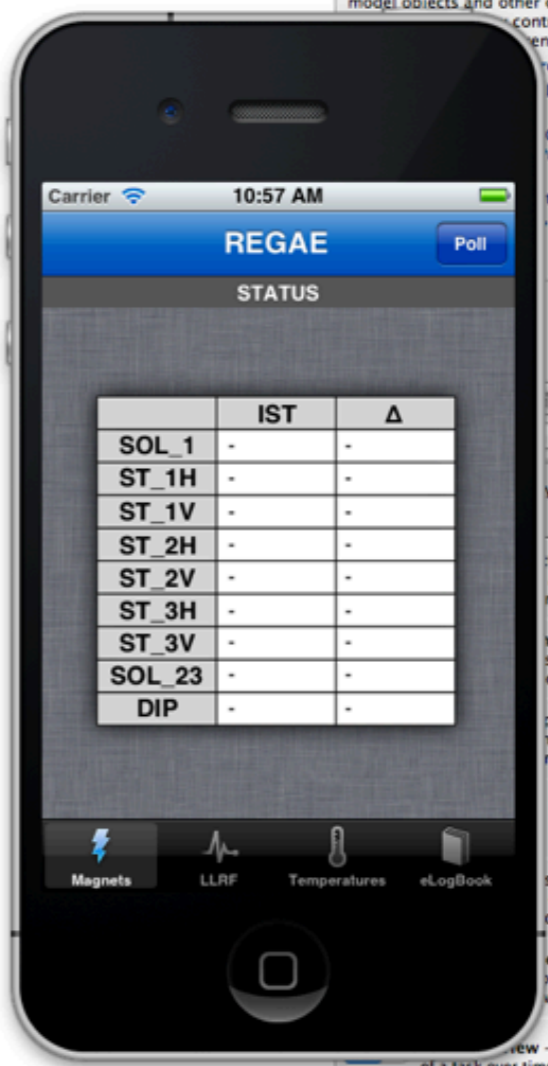
✓ Apple Developer Account

Simulator	*free*
Device	80€/year

iOS Development

✓ Mac

✓ Apple Developer Account

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iOS App Deployment

iOS App Deployment

App Store   B2B   In-House

iOS App Deployment

App Store   B2B   **In-House**

iOS App Deployment

- 299€/year

- custom *Enterprise App Store*

- no Apple review!

- apps are hosted on internal servers

- over-the-air push via MDM servers

iOS App Deployment

Thank you!

Thank you!

Questions?