

**Esri Developer Summit**

March 8–11, 2016 | Palm Springs, CA



# Test iOS Apps like a boss

---

Presenter: David Lednik

<https://github.com/dlednik/test-ios-like-a-boss>

@DavidLednik

# AGENDA

- **Introduction**
- **Attendees**
- **Terminology**
- **Test strategy**
- **tests (FT/ICT/UI)**
- **Room for Improvements**
- **Summary**
- **Questions**

# About me

- Slovenia
- ArcObjects
- EDN Analyst
- PE in Runtime team
  - .NET
  - iOS



# My audience

Questions for you...

- **New to testing?**
- **Hoping to improve testing?**
- **Anyone already tests UI?**
- **Any OSX developers/testers?**
- **Any Swift developers?**

# Terminology

We need to be on the same page...

- **Unit test**
- **Functional test**
- **Image comparison test**
- **UI test**
- **Manual test**

# Test strategy

Why is this important?

- **No need to test our SDK**
- **We use API design**
- **We use Test design**
  - Use case driven
  - Review/Feedback
- **Write tests**
  - Review/Feedback
- **SCRUM**
  - communication

# Automated functional tests

## Why?

- **Test specific functionality**
- **Regression testing**
- **Test need to finish quickly**
  - Run daily
  - Every 2 days or once a week
- **Performance testing**
  - Between 0.5 and 1 second for execution
  - Geometry Engine @ESRI
- **Code coverage**

# Automated functional tests

Why?

# Demo



# Image comparison tests

How?

- Test framework setup
- `mapView.exportImage (Quartz!)`
- `mapView.drawStatus == .Completed`
- Prepare the image
  - Retina devices
- Image comparison
  - Resemble.js\* ported to Swift
  - Image size is device dependant
- Speed
  - 1h for approx.. 300 tests

# Image comparison tests

How?

# Demo

# Testing the UI

XCode 7 integrated tests...

- **True UI testing in XCode**
  - Login forms
  - lists, tables
  - Buttons, checkboxes, text fields
- **For specific application**
- **There are limitations**
  - No complex map interaction

# Testing the UI

XCode 7 integrated tests...

# Demo

# Room for improvements

Pushing the envelope...

- **Continuous integration (CI)**
  - Jenkins integration (Git)
  - Better reporting (IRC, Slack)
  - No command line tests
- **T-Plan robot**
  - <http://www.t-plan.com/robot>
  - <http://www.youtube.com/user/tplanltd>
  - Automate manual tests
  - Price?

# Issues

How to handle them?

- **geoNet**
- **ESRI Support**

# Summary

Things to remember...

- **Plan ahead**
- **Communication**
- **Terminology**
- **Fast execution**
- **Test your data & UI**
- **Log issues**

**Thank you!**

**QUESTIONS?**





<http://github.com/dlednik/test-ios-like-a-boss>

**Don't forget to give feedback on this session!!!**