## **Going Universal** iPad Lessons Learned at ING

#### Age Mooij Andrew Snare







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## Background

Things were going well...

## The Challenge

- Strong focus on UI look and feel
  - Heavily customized/styled UI
- Complex security requirements
- Coming from behind the market
  - There was an existing app based on the MSN chat-bot: universally embarrassing.

## **The Process**

- A pilot scrum project at ING
- 2 week sprints
- Started with one team, grew to 3 teams (iOS, Android, backend)
- Dedicated UX people
- Lots of internal stakeholders!

### The Big Demo September 2011

### The Big Demo September 2011

"That's great, but will it also work on my iPad"? – Really Important Manager

## Plan A

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#### BigPhone<sup>™</sup> — Just Scale Up

## **Plan A: Results**

- Took 2 weeks
- Developer hated being isolated
- Did not meet UX requirements
- It let us estimate the real effort.

## Lesson Learned



## For a high quality app, you really need to create a separate iPad UI.\*



## Plan B



#### A Tale of Two Teams

## **Plan B: Results**

- Lasted half a sprint
- Not sustainable due to merging overhead
- New team couldn't help but slow the original team: they needed help.

### Lesson Learned



This was a really bad idea!







#### One Big Happy Family





#### bigTeam = zip(newTeam, oldTeam)

One Big Happy Family

## Plan C Result: 1.0

- This worked!
  - Some pairs worked on new functionality, some on existing screens.
- Took 6 weeks, instead of 3
- Business very very happy.

#### **Lesson Learned**



Pair-programming is a fantastic tool for scaling a team up quickly.

## The Nerdy Bits

So what did we really need to do?

## Splitting the Screen



Rekeningen

Rekeningenoverzicht. Saldo, Af & Bij en Overschrijven

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Feedback

Deel uw ervaringen of doo oon gugg

Service

Contact met de ING on moor informatic

# Splitting the Screen

- Oh, the pain: UISplitViewController
  - It must be the root, but our starting grid is.
- View controllers could no longer be in charge of the entire screen.
- Handling teardown on errors was very very hard.

- Keeping the two sides synchronized:
  - Current balance
  - Refresh detail triggers refresh of master
  - Refresh master triggers selection, which forces refresh of the detail.

### **Lessons Learned**



#### Custom UI and navigation flow is expensive.

View controllers should use a shared model.

# **Modal Popovers**

Reuse existing view controllers inside model dialogs.

This saved us a lot of time.

#### Here be dragons:

-(UIViewController \*)parentViewController;

-(UIViewController \*)presentingViewController;



# if (iPad) ...

• Sometimes we could get away with a more generic solution:

view.autoresizingMask = UIViewAutoresizingFlexibleWidth |
...;

- We used a lot of if-iPad blocks:
  - if ([UIDevice currentDevice].userInterfaceIdiom ==
     UIUserInterfaceIdiomPad) { ... }
- We used subclassing:

@interface FooViewController\_iPad : FooViewController @end

## Rotation

- Rotation was originally omitted to save time.
  - Not an acceptable compromise on the *iPad: people expect all orientations to work.*
- Lots of small changes required, mainly with autoresizing behaviour.

### Technical Debt

Cleaning up the mess...

# Conscious Compromise

- Decision to trade off technical debt for meeting the deadlines.
- Paying off the debt is still an ongoing effort.

## Lesson Learned



Technical debt can be acceptable...

BUT

...be aware it may never be paid off. Don't make the compromise if this is unacceptable.





Just start with universal from the start...?

Stay agile, but anticipate going universal:

• For example, UI/UX design that is easier to scale.

### Where are we now?

And what's next?

## **A Success Story**



> 1,000,000 downloads Lots of feedback (about missing features) Consistent 4.5 star rating 4 major releases 2 minor releases About every 6-8 weeks

## **Sneak Preview**



## **Sneak Preview**

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## **Sneak Preview**

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## One more time...



- For a high quality app, you really need to create a separate iPad UI.
- Bad idea: 2 teams, 1 product.
- Pair-programming is a fantastic tool for scaling a team up quickly.
- Custom UI and navigation flow is expensive to build and maintain.
- View controllers should use a shared model.
- Technical debt may never be paid off: don't make the compromise if this is unacceptable.

### **Thank You!** Questions?

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