### Theis Trevor Egeberg Senior iOS / macOS developer

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#### What others say

"Theis facilitates a positive and creative work environment. His ability to quickly understand the logics of complex new information sped up the development time dramatically. Many times Theis found creative and intelligent solutions to conceptual problems, this has been definitive for the success and quality of the app. Based on our work together the Danish defence warmly recommend Theis as a freelance iOS developer."

Frank Dyerhauge Thøgersen, special consultant, Danish defence, 2019

"I had the pleasure of conducting a secure code review on an iOS app written by Theis for a Danish national agency. Theis' code was legible, lucid, effective and robust, and his usage of platform APIs just hit the mark. But most importantly (in my opinion at least), Theis writes secure code."

Mikkel Holm Brøndum, senior analyst, CGI, 2021

## **Freelance projects**

I have worked on more than forty freelance projects. The list below is just some honorary mentions.

#### "Sundhedskortet" Danish health insurance card app

Role: Solo iOS developer Team size: 10 Year: 2020 - 2022 Client: Danish agency for digitisation Technology: iOS, Swift, UIKit, Combine, accessibility

Following the success on the driving licence app, members of the original team were lucky enough to move on to the health insurance card app. While it was smaller in scope the challenge, there was full and complete accessibility demands. It's very hard to find resources that document how accessibility is done well, and even experts say that there are no good examples of apps that are fully accessible. We managed to do this, and the experience I got working with accessibility on iOS is invaluable to me today. This project was also finished within time, budget and well beyond original scope.

#### "Kørekort" Danish driving license app

Role: Solo iOS developer Team size: 12 Year: 2019 - 2021 Client: Danish agency for digitisation Technology: iOS, Swift, SwiftUI, Combine, QR, CryptoKit, Code obfuscation and app hardening

We were a small dedicated task-force that designed the concept from the ground up. The solution contains custom-built cryptographic solutions that are secure by design. The details aren't public but even if they were it would be unbreakable (I stand by that claim). I spearheaded the QR burst technology that was original at the time. It allowed us to transfer several megabytes over QR codes. The solution was very complex but the codebase was modular enough to switch out frontend technologies midway through the project. It was completed within time, budget and well beyond the original scope. We received stellar remarks for architecture and implementation during external code and security reviews.

#### <u>IKEA Place</u>

Role: Senior iOS developer / Project lead Team size: 2 Year: 2018 - 2019 Client: Shape A/S Technology: iOS, Swift, ARKit, RealityKit, 3D, Blender, Python, usdpython, Binder, ReactiveKit

Building an immersive AR experience where IKEA' customers can place furniture in their own homes. My task was to "build the app" along with one other developer. The time pressure was the biggest challenge, so creating an architecture that could withstand sudden design changes was finally what saved the day. AR was of course a chapter by itself. My biggest learning from this project was getting into 3D which has become a big hobby of mine. The project was finished on time and within budget.

#### MFT - Militær fysisk træning

Role: Senior iOS developer / Solo developer / Project lead / Design Team size: 3 Year: 2017 - 2018 Client: Danish defence Technology: iOS, Swift, Realm, macOS

The Danish defence has a very complex training programme designed by physiotherapists and physical fitness researchers. My task was to transform their model of how and when to train into an easy interface despite the complexity behind. The main challenges were creating a data model that could withstand updates and complexity, while being easily updated by the physiotherapists who maintain it. My main learning from this was on-the-fly updating of Realm and secondly upwards managing a huge political organisation. The project was finished on time and within budget.

#### ITX-Flex

Role: Senior macOS developer / Solo developer Team size: 4 Year: 2015, 2019 (in total one year) Client: Arcanic Technology: macOS, Postman, low level C libraries, custom cryptography, screenshots, background process monitoring

The universities of Denmark are moving towards allowing students to do their written exams in their homes or from abroad. My task was to write the desktop client for macOS. It involves extensive monitoring of the computer from the background. The main challenge was to make turn the very deep flow of an exam into code that could be maintained for at least six years. An exam can be cancelled, a user can be queued, uploading answers can be queued, the user' answer must constantly be backed up on the server, etc. The project was finished on time and within budget

#### Nordea banking app

Role: Senior iOS developer Team size: 300 Year: 2015 - 2016 Client: Nordea Technology: iOS, Objective-C, KYC, cryptography

I spent a year on the vast team working on Nordea' banking app. I finally ended my period there myself because the office moved to a location that wasn't working for me. The main challenge was to work with a team of that size, but it was wonderful to get to know so many developers from all over the world. My main learning was KYC and banking laws, also it was a good refresher on Objective-C. The project will probably never be done, as Nordea priorities their banking app highly (2019).

#### Mobile device ticketing

Role: Senior iOS developer Team size: 4 Year: 2014, 2015, 2016 (1.5 years total) Client: HSL, DSB, Ruter, DOT, Goappified Technology: iOS, Swift, Objective-C, BLE, CoreBluetooth, NFC (custom hardware/software) This project is still ongoing so details are under NDA.

#### Halifax restaurant app

Role: Senior iOS developer Team size: 4 Year: 2015 to now Client: Halifax Technology: iOS, Swift, appstore, enterprise side-loading of apps, beta-testing

Guidance and developer for anything iOS. Building rapid prototypes of many different ideas, and providing a framework for their iOS app. This has been a long relationship where the challenges have not taken the front seat, rather it's been fun to work with someone who makes food for a living. Maybe I've learned something from their very nice and sympathetic way of treating each other in the work environment.

# Danish Red Cross UV-Indeks, Stark, Danish Red Cross app for medicine, ISS cleaning app

Role: iOS developer Team size: 4 Year: 2012, 2013, 2014 Client: Responsfabrikken Technology: iOS, Swift, appstore, enterprise side-loading of apps, beta-testing

"In-house" freelance iOS developer. Writing this in 2019, I remember the main challenge was about converting time zones and showing many charts on top of each other based on different geolocations. As I remember it I didn't solve the problem (someone else did) but I learned to not underestimate time. This was where I started my time as a freelance developer, so I'm sure I learned a lot and the challenges were so big I didn't understand them at the time.

## Work history

2012 - <b>Now</b>	Freelance iOS / macOS developer	
2012 - 2013	<b>Inventors Of</b> Founding partner, iOS developer	
2010 - 2012	<b>TripleLBi</b> Director of Innovation Technical project management Idea and innovation driver Owner of iOS products	
2006 - 2010	<b>GoViral</b> CTO Day to day management of technology department Worked with international clients such as: Coca Cola, Nissan, Opel, Dove, Quiksilver, Opel, MTv, Nokia, Sony Playstation og Goodyear, Samsung	
2004 - 2006	Synkron CMS Software architect	
2002 - 2004	<b>BellCom</b> Full-stack developer	
1997 - 2002	<b>Eisenstein</b> Full-stack developer	

### **Expert level knowledge**

Swift / Objective-C / Cocoa / UIKit on iOS, MacOS and Linux - since beta SwiftUI and Combine - since beta Core data ARKit, RealityKit - since beta BLE, NFC and Bluetooth - 6 years Vapor - 4 years Cocoapods, Carthage and Swift package manager Fastlane Agile development and the scrum process Large online payment and banking solutions **CryptoKit, SecureEnclave** and cryptographic / security theory and practical implementation **Promon ShieldSDK** and app hardening and obfuscation theory **ReadID SDK** and the structure of passport NFC chips and underlying data structures **QR**, **barcode-128** and the ins and outs of compressing data to fit into them Accessibility on iOS Game design C. C++ GIT **OOP, POP and functional** paradigmes SOLID, KISS, DRY, YAGNI, Composition - And I try to just leave the code cleaner than I found it...

### Security clearance

2019, 2020, 2021 - PET Hemmeligt (HEM) / NATO Secret (NS) / Secret UE

### **Other certifications / Memberships**

Prince2 certified project manager Mensa

### **Spoken languages**

Danish English German French

### Hobbies

Dancing and teaching dance Playing piano More code! :-)

### References

Simon Hervik Product Owner at the Danish agency for digitisation +45 41 78 23 45

Jonathan McAllister Senior iOS developer at Shape jonathan.mcallister@gmail.com

**Frank Thøgersen** Special consultant at the Danish defence +45 29 76 07 72

**Balder Olrik** Entrepreneur Former director of Eisenstein Former creative director and founder at GoViral +45 28 88 88 11

**Thomas Weikop** Director Spacerebel +45 41 81 28 60