Talking with Tech Leads

From Novices to Practitioners

Patrick Kua

Foreword by Jim Webber

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Foreword

By Jim Webber, Chief Scientist, Neo4j
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When Patrick approached me to write this foreword, I was a little hesitant. I'm not especially renowned – not even as a Tech Lead! But after I read the book, I began to understand why Patrick believed I'd find the book worthy of a small contribution.

This is an important book and it makes a substantial contribution to the soft side of software: namely one that begins a path towards empirical reflection on what it means to be a senior software engineer. Moreover, in "Talking with Tech Leads" Patrick has captured a wide variety of experiences, opinions, and reflections on what it means to bear the responsibilities of a Tech Lead, far beyond "merely" being competent at software delivery.

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[1]http://jimwebber.org
[2]http://www.twitter.com/jimwebber

Uncovering the practices, emotions, and ambitions of Tech Leads as well as their doubts, uncertainties and tribulations is a valuable first step towards empirically qualifying the nature and expectations of the role. In taking that step, it enables the new Tech Lead to manage their own expectations (and nerves) and the seasoned Tech Lead to grow through understanding how their peers have solved (or failed to solve) the challenges that beset others.

This is not a career guidance book, or even a self-help book, though both I think are suitably addressed as a side-effect of reading and internalising the interviews. This is a book that you can turn to when you're feeling unsure about moving into, or expanding your role as a Tech Lead. It provides an immediate sense of community, global and diverse, by the nature of the interviewees. Their stories resonate precisely because they're honest accounts from representative technologists, much like you, the reader. All are well catalogued and curated to be engaging and provide an overarching narrative that maps conveniently to a typical career arc.

I expect, like most software people, ordinarily I read technical works much more than I read experience reports. "Talking with Tech Leads" has helped me redress some of that balance and think through what it means to lead software teams in the early 21st century. For that I am grateful to Patrick and I hope you'll feel that the book will help you to reflect upon, and address, your challenges and aspirations around technical leadership too.

Preface

Why I wrote this book

I have played the Tech Lead role countless times, in my role as a software development consultant at ThoughtWorks. In over a decade of working in IT, I have seen how different Tech Leads operate and grapple with their difficult problems. I have also trained, coached and successfully developed other Tech Leads – both within ThoughtWorks and for the clients we work with. I noticed that the transition for a developer to a Tech Lead is never easy. Even experienced Tech Leads struggle when they first change teams or organisations.

When you, the developer, become a Tech Lead, you suddenly realise how lonely the role is. You will no longer be "just a developer," and you will no longer be treated as such. When you look for support and advice, you find that no one can understand your unique position, team and context. If you work for a larger organisation, you are in luck – you have other Tech Leads around you. But even then, you cannot

easily see how they run their teams and even less likely, how they think through the problems they face.

I started this book project because I saw how developers struggled to adapt to the different skills and responsibilities that come with the Tech Lead title. The experience you gain as a developer does not prepare you for the responsibilities of the role. Unlike the bountiful number of books on programming, there are few resources that help developers prepare for this role, or help Tech Leads develop themselves further.

This book helps you on your journey to becoming a better Tech Lead.

What you'll find in this book

This book offers you the experiences from real-life Tech Leads. I wanted this book to represent a wide spectrum of experiences and found Tech Leads who work all over the world in different circumstances.

Some Tech Lead works for very large organisations, whilst others work for very small groups. Their teams write software in industries such as travel, finance, real estate, media, and consulting. Some Tech Leads guide a team of very experienced developers, whilst others lead a team with a mix of experience, including developers relatively new to the industry. With this

spectrum, I hope there are people you can relate to, and also new circumstances to be aware of in the role of a Tech Lead.

The Tech Leads share their views their role and how they solve problems through a series of curated interviews. The structure of the interviews was intentionally similar, in order to see how different Tech Leads responded.

You will find that there is no single *best* way to lead development teams. Instead, you will discover different approaches to dealing with different aspects of the Tech Lead role.

Acknowledgements

First of all, I would like to thank all the contributors. I know how time-consuming the Tech Lead role is and it took significant number of hours for each person to think about and write down their thoughts about the role. Sharing stories about tough times requires humility and everyone offered their experiences to share and learn from.

I'd like to give special thanks to contributors in the *Novice* section of the book. Not only were they hard to source, because being a Tech Lead for the first time happens only once of course, but they were also courageous in sharing their experiences with the world.

Thanks too to the countless people who helped put me in touch with the people included in the book. Without their recommendations and people they introduced me to, I would not have been able to pass on such a wide variety of experiences and backgrounds.

I recognise that the contents may be a little biased with many people having some connection with Thought-

Works[3]. This is down to my background and network. I worked conscientiously to cast my net further afield, attempting to capture Tech Leads working in a diverse set of companies, industries, and with a broad range of experiences. I hope that as a reader you benefit from this.

I'd also like to thank the editor I collaborated with, Angela Jameson Potts of Virtual Editor[4]. It was a great pleasure to work with her again, and I greatly appreciated her flexible approach to working with very non-traditional book formatting tools.

Finally, I want to acknowledge you, the reader: thank you for selecting this book. I hope you learn much from it.

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[3]http://www.thoughtworks.com
[4]http://www.virtualeditor.co.uk/

Testimonials

"I wish I had read this book five years ago. It changed the way I worked the day after I read it. I would recommend it to any new or aspiring Tech Lead."

– David Morgantini, Tech Lead, UK Government Digital Service

"Reading 'Talking with Tech Leads' is like going to a conference and watching a great panel discussion on leading teams."

"This book has made me rethink my position and the way I work with my direct reports."

– Nick Malnick, Tech Lead, DRW Trading Group

"I like the evolution of advice, comments and interviews and increasing depth and complexity generated by the book structure."

– Hugo Corbucci, Tech Lead, ThoughtWorks

Introduction

In the Beginning

Technical Leaders – Tech Leads for short – almost all start out in the same way: a programmer or software developer, either by circumstance or through the passing of time, who is asked to take on the Tech Lead role. The story often goes something like this:

Meet Brian. Brian works as a developer for Zalana, a company selling a software-as-a-service product to people who work in Human Resources. Brian has been with Zalana since its start, three years ago.

Over the years, the development team has grown from just Brian to three other developers. The other developers really respect Brian for his ability to design,

test and write robust code that is also easy to understand. Sheryl, the Product Manager, drives the product direction and almost always approaches Brian when she has questions because she finds he communicates well with her. He is particularly good at explaining technical solutions or constraints to her.

One day, the founder of Zalana, Bob invited Brian out for breakfast. Brian thought this a little unusual because he knew Bob never ate breakfast and preferred to spend time late into the evenings with investors and potential customers. Intrigued and slightly concerned, Brian agreed to meet Bob at a cosy French restaurant. Brian arrives, sees Bob on his smartphone, reading and responding to emails, and sits down opposite.

Bob sees Brian approach and puts down his smartphone. Bob smiles, waiting for Brian to sit before announcing, "Brian, I have some exciting news. Our business is doing well. We have just signed three big customers. I know the development team has been working hard. We can really see the results, but we need to grow the team; double or triple it if need be." Bob pauses to scan Brian's face. "We want you to take the Tech Lead role."

Brian's mind is reeling at the prospect of three new customers and the fresh stream of demands on the development team, as well as the offer of a new role.

Questions race through his head: Why me? What will investors and the rest of the business expect of me? How will the other developers see me? Will I still get to write code?

Brian knows Bob's impatient but good nature and answers, "OK, I'll give it a go." But, as Bob orders another coffee, Brian looks at his menu and thinks, "Now what?"

Although this is pure fiction, it illustrates the lesson underlying many of the interviews in this book. The Tech Lead role is quite distinct from the developer role, even though they overlap to some degree. However, those who move into the role are always surprised at what the differences are. Like Brian, many find themselves thrust into the role of a Tech Lead by chance or opportunity, and it was only when they found themselves in the Tech Role that they realised the different responsibilities required many skills that you don't develop in the role of a programmer.

The time you spend honing your development skills, such as seeing patterns in code, refactoring code to be easier to maintain or extend, and writing tests does little to prepare skills in resolving conflict, establishing a team culture, or communicating technology in ways that non-technical people can understand.

Tech Leads almost always find themselves working

solo and the question *"Am I doing the right things as a Tech Lead?"* is often difficult to answer. Most developers have other developers to ask for their opinion on which tool or framework to use, or to get feedback on the design or testability of their code. A Tech Lead rarely has other Tech Leads around to share ideas on approaching people problems, or ways to more effectively communicate pressing technical matters to the business.

This collection of interviews provides that missing link: how others approach the role, the challenges they have and the different experiences demonstrate the ways people succeed in different ways as a Tech Lead.

From Tech Leads to Tech Leads

For the purposes of this book, I define a Tech Lead as:

> A leader, responsible for a development team, who spends at least 30 per cent of their time writing code with the team.

I feel that writing *some* code is an important aspect of technical leadership. Having a technical background

is not usually enough to help facilitate discussions or mitigate technical risk. Some organisations have roles like *Technical Manager*, *Development Manager* or *Team Lead* and people in these roles do not write any code. This book does not attempt to describe their responsibilities or challenges.

This book focuses solely on giving advice to software developers who suddenly find themselves dealing with significantly, but not exclusively non-technical tasks. Suddenly, when given the Tech Lead role, a developer is required to balance new non-technical tasks with their familiar world of detailed design, solving software problems (not people problems!) and cutting code.

Although many people could have given responses to what they feel a Tech Lead does or should do, I wanted to collect lessons and experiences from real Tech Leads. The contributors I have included in this book match two simple criteria:

1. They are responsible for a team of more than three developers;
2. They write code with the team.

These two factors excluded many who would typically bear titles such as Software Architect, Team

Manager, Development Manager, Head of Development, or Agile Coach. The people playing these roles may have very good ideas and opinions but I wanted to avoid the old adage:

> Do as I say, not as I do.

Rather than giving you ideas that may not have been tried and tested, I offer you stories and lessons learned from people with *real world experience*, people who were playing the Tech Lead role at the time of their interview.

From Novices to Practitioners

The people in this book represent two perspectives that provide the best insight into the Tech Lead role.

- **Novices** - You will not be the first developer to transition into the Tech Lead role. The people interviewed in the Novices section share how they deal with the transition from writing code all day, to suddenly being responsible and accountable for a whole new set of unfamiliar

tasks. Each person in this section described themselves as a "first-time Tech Lead" at the time of the interviews.

- **Practitioners** - First-time Tech Leads quickly transition into experienced Tech Leads in the course of time. While the Tech Lead continues to encounter unique situations they did not experience as a developer, they can draw on other situations they have dealt with previously as a Tech Lead. The people in this section have often played Tech Lead for several teams, or have played the Tech Lead for several years. They share their wisdom and insights they gleaned while gaining more experience in this role.

Finding seasoned Tech Leads proved significantly easier than first-time Tech Leads, and the uneven weighting between the two sections reflects that. With significantly more responses from seasoned Tech Leads, I found several stronger themes emerged and I grouped the responses into:

1. People – Focuses on the softer skills required by the role of Tech Lead.
2. The Tech of a Tech Lead – Outlines different technical responsibilities, which distinguish the Tech Lead from simply being a technical manager.

3. Bridging Business with Tech – Highlights a different perspective and more outward-looking focus.

4. You – Contains responses that relate to you, as an individual, in the role of a Tech Lead.

I have attempted to break down the responses into these different themes, adding in some of my own experiences and observations about what emerged in the responses. I hope the themes enable you to get understand and navigate the various dimensions of the Tech Lead role and hopefully they will make it easier for you to refer back to in the future.

The next page shows a word cloud based on the responses in this book. The word cloud contains keywords that recur frequently and highlights further themes that emerged from the interviews. You may notice that some of the words in large type correspond with the overall themes that emerged, including frequent use of the word "people" as well as thinking about "code".

About the Author

When this book was being put together, I was working as a consultant for ThoughtWorks, where you would find me leading teams and striving to create great environments where developers could thrive, always focused on delivering value to end users. I have a great interest in balancing the people side to software development, as well as the challenge and enjoyment of solving hard technical problems. And yes, I still write code too and love it.

I am passionate about improving teams through the use of Retrospectives[29] and growing individuals. I have coached a number of developers into the role of being a Tech Lead and I hope this book helps you grow your mastery as a Tech Lead or better prepares you for the start of your journey as a Tech Lead.

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[29]http://leanpub.com/the-retrospective-handbook