



# THE ENGINEER'S GUIDE TO HACKING LIFE

An Illustrated Guide to Simplifying  
Everyday Activities Like a True Engineer



## LIFE. IT'S COMPLICATED.

Unnecessary hardware and software challenges at work cause a ripple effect on the rest of your day. After all, dealing with the explosion of big data and its strain on hardware means significantly more time spent manually developing code and integrating the hardware with your existing operating system. And that means less time spent at home.

Freescale is here to help.

Through an engineer's innate intelligence, natural curiosity and fervent attention to detail, this handy guide presents some clever and often not-so-obvious ways to streamline the day.

Let this pragmatic perspective be your guide to making work – and therefore, life – easier. And look for more Life Hacker-style communications from Freescale focused on helping you increase your productivity and efficiency.

### **Life Hacking:**

*Productivity tricks that programmers devise and employ to cut through information overload and organize their data.<sup>1</sup>*

*Any trick, shortcut, skill or novelty method that increases productivity and efficiency, in all walks of life; in other words, anything that solves an everyday problem of a person in a clever or non-obvious way.<sup>2</sup>*

“Software engineering might be science; but that's not what I do. I'm a hacker, not an engineer.”

—Jamie Zawinski, aka jwz\*

## CARPE DIEM.

Software engineers possess a combination of healthy skepticism with optimism and self-confidence. They start each day with this mindset, anticipating trouble in order to work around it.

### WAKING UP ON TIME.

Next to watching someone else's software gasp for air while it brings the rest of the system to its knees, the relentlessly on-the-go software engineer's worst nightmare is hypersomnia – an abnormal increase of 25% or more in time spent sleeping.

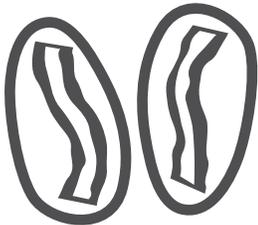


#### HACK: SMARTPHONE WAKE-UP CALL.

You can put your smartphone in an empty drinking glass to easily amplify the sound of the alarm. Engineers, however, know that crystal glass emits a light, reverberating ring while regular glass gives off a brief, dull thud. Follow the engineering hack and put your smartphone in a crystal glass with a lead oxide content ranging from 33-58 percent. You'll never oversleep again.

### FINDING TIME FOR BREAKFAST.

Food is fuel for the body. But what happens when busy engineers are rushed in the morning? They break their fast with this simple hack:



#### HACK: BACONCAKES!

India's first prime minister once said, "The highest type of efficiency is that which can utilize existing material to the best advantage."<sup>5</sup> Fastidious engineers hack breakfast by filling an empty ketchup bottle with pancake batter, then squeezing the batter on top of bacon while it's cooking. Voila! An instant, hearty and efficient grab-and-go breakfast that you can eat on the way to work.

### NEVER FORGETTING TO NEVER FORGET.

Software engineers have a lot on their minds. On top of daily management tasks, meetings and brainstorming sessions, there's always tons of code to write, compile and test. It's easy to see how they can forget an essential item while leaving home for the office.



#### HACK: A SHOCKING REMINDER.

Turning your doormat into a daily reminder to remember your keys, phone, lunch and laptop is a good idea, but good engineers leave nothing to chance. Hack that mat by adding a small electronic shocker, which you can build from a disposable camera and a 1.5v battery. You'll soon possess the memory of an elephant.

## SIMPLIFY YOUR WORKDAY.

According to a recent study of more than 1,000 developers, 93% feel they are the most valued employees at their company and feel empowered to suggest changes to business processes, products or services.<sup>3</sup> In other words, engineers are not just coders anymore. They're *innovators*. Follow their lead when it comes to hacking everyday work challenges.

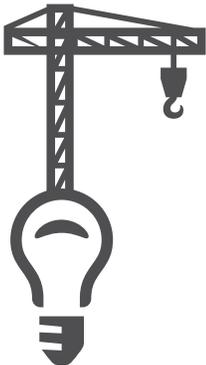
### BITING BACK WHEN BIG DATA BITES.

The mushroom cloud of big data has placed increasing demands on hardware performance. For many engineers, hardware that can handle this exponential growth of data is top priority, but the ability to build upon it simply and easily is much lower on their agenda.

#### HACK: BUILD ON SMARTER HARDWARE.

Savvy engineers deploy middleware technologies that get deep into the hardware and know the 'bits and bytes.' This allows you to build atop hardware and unlock the power in complex systems, which decreases development time and programming complexity. Engineers who work with automated middleware technologies experience streamlined development, smarter hardware, core-agnostic flexibility and faster time to market. And that means more time spent innovating and less time waiting.

To further hack big data, the application layer should be accompanied by software examples and reference code you can use immediately or modify on your own, and real application engineers who can help you get the most out of your builds. Lastly, it helps to have a platform developed by over 700 software engineers. (Just saying.)

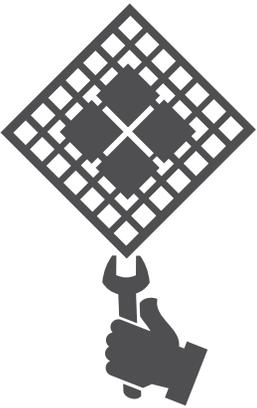


"The occasional visit of success provides just the excitement an engineer needs to face work the following day."

—Koichi Tanaka\*

## BUILDING BASED ON BUSINESS NEEDS.

Engineers require solutions that fit with the internal needs and requirements of the various line-of-business units and for specific products. No small task.



### HACK: GET MORE FROM YOUR CORE.

Taking a core-agnostic approach gives you the flexibility to build end-to-end solutions based on real business needs and specifications. In doing so, both hardware and software are built in tandem, empowering you to provide the best customer experience in onboarding and usage. Additionally, I/O virtualization takes hardware which previously was foreign or difficult to build on, and replaces with vNICs – creating familiarity and allowing you to focus on the areas with which you're most comfortable.

## MEETING DEADLINES.

According to a survey of more than 1,000 software developers, the number one thing that stresses them out at work isn't the quality of their code, application performance issues, what they need to learn to maintain their work performance or whether or not they took the best approach to a particular problem. It's meeting deadlines.<sup>4</sup>



### HACK: ACCELERATE SPEED TO MARKET.

Software engineers already spend nearly a full day out of their work week waiting for tests to complete or code to finish compiling.<sup>5</sup> The ability to build quickly is critical to meeting deadlines (and keeping engineers from imploding from the stress). Look for solutions that allow you to build atop a hardware simulator while the silicon itself is built, while also empowering you to improve feature velocity for your LOBs in order to handle new and growing data challenges. Taking advantage of such powerful development technologies allows you to build in days and weeks, not months, creating a flexible environment focused on innovation.

## OWN THE NIGHT.

### DEALING WITH 'DRIVE TIME' TRAFFIC.

Occasionally software engineers work normal business hours and therefore need to contend with the butt-whipping that is rush hour. Here's how they roll:



#### HACK: CALLING ALL ANDROIDS.

Testing different times of the afternoon to head home is a good way to gauge traffic levels (even 10 minutes can make a difference). Engineers take it a step further by installing applications on their smartphones that provide real-time data like average speeds, accidents, traffic jams and roadwork currently taking place on their route home.

### RECEIVING BETTER WI-FI AT HOME.

Sure, software engineers take work home. But it's not all-work-and-no-play. They need capable Wi-Fi at home for hardcore online gaming, too.



#### HACK: FIRST, FINISH THAT MOUNTAIN DEW.

A trick engineers use to extend their home Wi-Fi signal involves cutting off the ends of a can of their favorite caffeinated beverage (emptied, of course), then slicing it lengthwise. Wrapping the concave sheet of aluminum around the back of the Wi-Fi antennae creates a quick parabolic reflector that rivals Wi-Fi N ranges.

### GETTING A GOOD NIGHT'S SLEEP.

The benefits to a full night's slumber are obvious. Whether or not you have trouble sleeping, there are hacks that engineers use to optimize their rest every night.



#### HACK: GET IN TUNE WITH YOUR CIRCADIAN RHYTHM.

First, make the room as dark as possible, which includes covering LEDs with black electrical tape. Go to bed by 11 p.m. when possible because your body creates a cortisol surge after 11 p.m. to keep you awake. Use biofeedback exercises to turn off your fight-or-flight response, which lets you go to sleep faster and stay asleep longer. And remember, espresso is not a sleep aid.<sup>6</sup>

## NOW, MAKE YOUR LIFE EASIER.

Nothing helps engineers hack their work like hardware and software solutions from Freescale.

Built with ease of use in mind, QorIQ processors are based on a flexible architecture that abstracts hardware complexity and enables customers to focus their resources on innovation at the application level.

Freescale also helps simplify development and provide performance-optimized solutions under the umbrella of an industry-leading partner and product longevity programs.\*\*

For more information on Freescale technologies that make work and life easier, visit [www.freescale.com/easeofuse](http://www.freescale.com/easeofuse).

“Unfortunately, I’m an engineer. I’m always thinking about, what’s the task and how do I get it done? And some of my tasks are pretty broad, and pretty fuzzy, and pretty funky, but that’s the way I think.”

—*Michael Porter\**

#### Sources:

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5 Electric Cloud developer survey, April 2013.

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<http://www.bulletproofexec.com/how-to-hack-your-sleep-the-art-and-science-of-sleeping>

\* Jamie Zawinski is a former professional software engineer responsible for significant contributions to the free software projects Mozilla and XEmacs, and early versions of the Netscape Navigator web browser. Koichi Tanaka is a Japanese engineer who shared the Nobel Prize in Chemistry in 2002. Michael Eugene Porter is the Bishop William Lawrence University Professor at The Institute for Strategy and Competitiveness, based at the Harvard Business School.

\*\* For Terms and Conditions and to obtain a list of available products please see: [www.Freescale.com/productlongevity](http://www.Freescale.com/productlongevity).