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Disclaimer: This is complicated stuff, and there are no easy, one-size-fits-all solutions. In this book, we share what we’ve learned over the years in our own journeys using extensive amounts of mobile internet along the way, as well as what we’ve learned from wide-ranging research and conversations with other mobile internet experts.

We have no formal affiliation or financial stake in any of the products or services we mention, except our own mobile apps. With anything you purchase, you are entering into transactions directly with the manufacturers and providers of those services.

This book is a sharing of our research and experience as full-time RVers ourselves. We can take no responsibility for the choices you make as a result of reading this book. We will do our best to share the pros and cons of each option as we understand them today, but ultimately you must continue your research and decide for yourself.

When issues arise, please seek support and resolution from the provider, vendor, or manufacturer you purchased from – not us!

Also by Technomadia:

No Excuses: Go Nomadic!

www.technomadia.com/excuses

A practical guide to the logistics of full-timing – income sources, mail, banking, healthcare, family, pets, safety, relationships, preparing, and much more!

This is a PREVIEW of ‘The Mobile Internet Handbook’ www.RVMobileInternet.Com/book

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The subject of this book is constantly evolving.

We’re constantly staying on top of this topic, and a newer edition of this book may even be available by the time you read this. In between book updates, we post RV mobile internet relevant news as it comes out, as well as provide more in-depth guides, product reviews and more at:

www.RVMobileInternet.com

We welcome you to join our free monthly e-mail newsletter - we’ll send you a summary of what’s changed in the mobile internet landscape recently:

eepurl.com/0KJG1

Join our free public Facebook group for discussions with other RVers, ourselves included, interested in this topic:

www.facebook.com/groups/rvinternet

Premium Membership & Private Advising

We offer a premium membership service, called Mobile Internet Aficionados, for those who want to keep up to date on this stuff with exclusive in-depth content, news analysis, webinars, and private Q&A forums. It’s our classroom.

We also offer advising sessions for those who’d like extra help figuring out their setup.

See the last chapter, The Ongoing Conversation, for more information and a money saving coupon for having bought this book already.
Dedicated to

Tim VeArd
1944 – 2013

Technology pioneer, national hero, and location-independent technology entrepreneur who inspired us in ways beyond imagination.

We miss you, Dad.

And a HUGE Thank You to all of our supporters who crowdfunded the rewrite and massive expansion of this book!
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In the spring of 2013, we set out to write a comprehensive blog post about all the options for keeping online while being mobile – bringing together in one place the years of content we had written on the topic.

By the time we were partway through, we knew this couldn’t be covered in a single post – there was way more than a book’s worth that could be written on the topic!

And thus, on the spur of the moment, the first edition of *The Mobile Internet Handbook* was born. We had never published a book before – and we put together the first edition in under 3 weeks on a shoestring budget, eager to get back to our real jobs.

We did not expect the book to take on a life of its own – gathering so many reviews and endorsements as a must read for RVers who need to keep online. Eventually we came to realize just how needed this sort of resource was.

Technology marches on, and by mid-2014 it was time to update the book.

But we didn’t just want to quickly update the book to make it current, we also wanted to expand the content and provide more resources to help more people live vibrant and connected mobile lives. And this would take more than a couple weeks to accomplish!

To gauge just how much interest there was in a second and expanded edition, we decided to try a book pre-sale via the crowdfunding site Indiegogo.

We hoped to at least cover the costs of professional graphics, illustrations, and editing so that our new book would look more like a book and less like a long blog post. We set
several stretch goals for frequently asked-for topics that we could also add to the content. We expected at most to be on the hook for writing only a couple new chapters.

We were blown away by the support we received, and in the end every single one of our stretch goals was fully funded!

The second edition thus contained seven entirely new chapters, as well as vastly expanded content in all the rest. The original book was only 87 pages, and the second edition was well more than double that size.

We hired professionals to handle the editing and graphics, and the creation of our new RVMobileInternet.com website. We not only hired professionals, but fellow mobile professionals who are also dependent on the very topic of this book.

We’re pleased as punch to work with Jeanette and Dennis of MotorhomeOfficeOfDesignAndTechnology.com for the style and design (from the cover art to the fun illustrations you’ll see throughout the book, as well as the color and typography), Jason and Kristin of BoondockMarketing.com for the bones of the new website, and Ann of Beardsley Editing for the editing of this book.

We asked all of them for fair market bids for their services, but we know each one of them went above and beyond to help us make this an awesome resource for our mobile communities…and we can’t recommend or thank them enough.

We’re also thrilled that Jack Mayer, a fellow mobile tech guru we’ve always respected, approached us to be involved. He contributed a chapter to this book, will soon publish an advanced addendum book on Customer Premises Equipment (CPE) devices (get on our e-mail list at eepurl.com/0KJG1 to be notified when it’s ready), and he has become a regular contributor of reviews and exclusive content to our RVMobileInternet.com website as well.

Now this brings us to this new third edition for 2015.

Things in the mobile internet world seem to never slow down. The new edition hadn’t even been out for 2 months, and several major changes in the industry occurred. 2014 ended with a new mobile internet landscape - and we rose to the challenge of keeping up with it all through our new premium membership service and resource center.

Competition between the carriers has increased, new offers and plans have emerged, and new technologies have come to market. Further disruption came when our former top cellular recommendation for heavy data users,
Millenicom, vanished from the scene in October. Meanwhile, Verizon made a major policy changes concerning obtaining and keeping grandfathered unlimited plans. And more recently, some carriers added in long wished for features, like rollover data.

Thanks to the magic of modern publishing, we have been able to dive back into the book to create a refreshed 2015 edition - incorporating all the latest information, options, and recommendations - and polishing out some of the information we previously wrote.

If you have already read the 2nd edition - much will be familiar. This is not an epic rewrite and expansion like last year. But whether you skimmed or devoured the 2014 edition, you are certain to learn a thing or two this year.

We set out to create the definitive resource for RVers wanting to stay connected while on the road. We hope that you will agree that we have.
An Extra Thank You to Our Book Supporters

Listed below are the names of supporters who gave extra in advance to help make this book possible. We are eternally humbled and grateful for the funding we received so that we could take the time off from our other projects to focus on the research and writing of this book – and launching a new web resource for all: www.RVMobileInternet.com

A Technomadia Fan!
Andy & Wendy Young
Ann Beardsley & Elliott Walsh
Chuck & Ruth Treadway – OnTheRoad
Forrest & Mary Clark, Two For(e)Traveling
Fritz Neumann
George & Rhonda Kaupas
Harry & Tiffany Kidder
JMJ & LEJ
Joe & Wendy of AmericanGypsyGibberish.com
John Sasinowski
Joseph and Rachel Jones
Ken & Jackie Osinski – RViewoftheUSA.blogspot.com
KentWilliamsPhotography.com
Kiki Kikinator Potatohead
M. Proulx
Michelle Cegon
Mobile First
Molly McD and Family
Patricia A. Bowen, Ph.D. a.k.a. Villagetart
Randy Britt
Rev. Michael Hollinger, wanna-be Nomad
Rich & Deavon
Sean Mahoney of SeanPatrickMahoney.com
Steven and Linda of thechouters.blogspot.com
Susan, A Full-Timer and Technomadia Fan
The Copeland Odyssey
Tom & Stacie of RVTexasYall.com
Veronica and Denny – RVOutlawz.com
Vic Neshyba, Austin TX
William Bailey – TheJourneyVisvi.com
Introduction

More than likely the internet plays at least some role in your life – and for many of us, it is central.

For anyone thinking of hitting the road, figuring out how to best keep online while exploring the world offline becomes critically important.

Whether you use the internet to keep in touch with loved ones, navigate to your next destination, look up accommodations, manage your finances, learn online, pursue entertainment, or depend on connectivity for your income source – building a connectivity arsenal that suits you is an essential chore most techno-connected nomads face.

Even those who don’t consider themselves techno-savvy at all still face needing at least some connectivity these days.

Who This Book Is and Isn’t For

This book is focused on internet connectivity options for mobile folks based in the USA.

And more specifically, some of the resources are geared specifically towards RVers and those living on the road – whether full-time or seasonal.

If you are setting out to explore the vast expanse of the USA for a prolonged period of time and want to remain connected, you’ve found a
great resource. We also include a primer on staying connected while crossing borders into Canada, Mexico, and beyond.

We are attempting to write this book in a clear manner that will be accessible to everyone – ranging from folks who don’t yet understand the difference between WiFi and cellular data, to those who are super geeks like us who understand the differences intuitively and who get turned on by advanced options.

However, there is no denying that at the root of it all, *The Mobile Internet Handbook* is pretty technical stuff; if you’re not tech-savvy already, hopefully this book will help you bridge the gap to be able to understand at least the gist of the issues you’ll face staying online.

Keep in mind, you’re going to be out there on your own needing to manage whatever connectivity toolkit you assemble, often miles away from any geek help. And if you are having trouble getting online, you may end up unable to ask for assistance in forums and groups. So before you get lost in the wilds (figuratively or literally!), make sure you understand what you have and how to use it!

Read these chapters over and over again if you need to, and do further research. You may need to enlist the assistance of a geeky friend or family member to help you assemble and install your arsenal.

Don’t be afraid to ask for help – before you really need it!

**Who Is Technomadia?**

We’re Chris and Cherie of Technomadia.com.

We’ve been traveling full time since 2006, mostly via various RV setups. Currently we call a 1961 geeked-out and solar-powered vintage bus conversion our home, but we have also full-timed in small travel trailers in the past.

As we’re both currently in our early 40s, we’re too young to be traditionally retired and not fortunate enough to be retired early…yet. And we have some serious wanderlust.

Thankfully mobile technology enables us to take our high-tech careers in software development, strategy advising, and technology consulting on the
road, allowing us to work remotely for our clients while also creating our own products.

Our business is Two Steps Beyond LLC (www.twostepsbeyond.com).

We consider ourselves to be “technomads” and have been able to create a lifestyle that combines our careers and our desire for mobility.

Needless to say, we absolutely depend on mobile internet to keep connected to our clients, manage our software projects, and keep in touch with loved ones.

And well, we’re just geeks who like to spend a lot of time online. Heck, we both pretty much grew up with being online as part of our teen social life in the 1980s, and we even met online (on a Prius forum) shortly after Chris first hit the road in 2006.

Before going nomadic, Chris worked in Silicon Valley, focused on mobile technology.

One of his jobs had him serving as the Director of Competitive Analysis (aka “Chief Spy”) for Palm and PalmSource – the companies behind the pioneering Palm Pilot and Treo. His job was to be intimately familiar with every mobile device and technology in existence, and he was tasked with traveling the world to dig up information to chart the future of the entire mobile industry.

It was not uncommon for him to be carrying dozens of mobile devices with him at a time – always raising eyebrows passing through airport security scans.

Times haven’t changed much actually – we still have dozens of mobile devices on board!

Cherie has run a software development business from home since the mid-1990s with a long history of working remotely for her clients. Her career involved technical writing and teaching high-tech topics to nontechnical people. When she met Chris during his first year on the road, she was accustomed to carrying smartphones able to tether her laptop to the internet. And it was essential for her to keep connected if she was to join him full-time.
Our first year on the road together was spent in a tiny teardrop travel trailer (16') equipped with just the essentials – solar electricity and mobile internet. Luxuries like air conditioning, refrigeration, and even plumbing had to wait a year until our second travel trailer (17') was custom built for us.

After so many years on the road, we have tried a wide variety of mobile internet solutions.

We know this stuff intimately, our lives are living laboratories for mobile technology, and it is our honor to share our wealth of experience with you.

Follow our life on the road at:

- **Blog**: [www.technomadia.com](http://www.technomadia.com)
- **Facebook**: [www.facebook.com/technomadia](http://www.facebook.com/technomadia)
- **YouTube**: [www.youtube.com/user/TalesFromTechnomadia](http://www.youtube.com/user/TalesFromTechnomadia)

Be in touch at: [contact@technomadia.com](mailto:contact@technomadia.com)

**About Our Guest Author, Jack Mayer**

Jack Mayer has been a full-time RVer since 2000. He is a freelance writer specializing in RV-related technical topics, author of a popular RV-related website ([www.jackdanmayer.com](http://www.jackdanmayer.com)), and speaker at RV rallies. His professional background is in computer system software design, networking, and operating systems.

For the past 15 years, he has designed and implemented a variety of wired and wireless networks for RV parks, small businesses, and individuals. In addition to his work in the communications field, Jack has specialized in the design and implementation of RV electrical systems for off-grid living.
More About This Book

Just some disclosures:

• Except where specifically disclosed, we are not financially affiliated with any of the products or companies we talk about in this book, and we’re not writing this book to sell you anything. We’re just sharing our lessons learned, our tech backgrounds, and our years of experience living on the road while keeping connected. We strive to be as unbiased as we can.

• Yes, some of our tech equipment has been provided at no charge by the manufacturers/vendors – but these usually come with the expectations of us being reviewers or beta test sites in which we provide feedback to the companies to improve their products. We get a say in how these products evolve to better meet the needs of folks like us who are truly mobile. And being able to get free or loaner gear helps us review far more products without having to charge an arm and a leg for this book to cover equipment expenses. But some stuff we do buy on our own as well.

If you know of any cool mobile technology that you think we should consider featuring in a future book update or on RVMobileInternet.com, let us know. If you are a manufacturer, let us know if you would like to send us some gear to test and review.

Beware: You can count on our honest (sometimes brutally so) feedback.

• Much of our current tech is Apple products, though in the past we were both Windows users. We are not hopeless Apple fanatics – we have been won over by the quality of the hardware, software, and customer support – and now we have iPhones, iPads, a Mac Mini, and MacBook Pro laptop.

However, despite our Apple-centric personal arsenal, this book it not platform specific – all are welcome here! We’ll try to keep our Apple enthusiasm balanced.

• In addition to our consulting projects, we also write mobile travel apps for the iPhone, iPad, and Android.
‘Coverage?’ ([www.twostepsbeyond.com/apps/coverage](www.twostepsbeyond.com/apps/coverage)) is the app most related to this book, and you’ll see screen captures in the book used to compare the various carriers. This powerfully simple app uniquely displays overlayable coverage maps from the major carriers to help us technomads know where we can best keep connected.

If you do buy that app, you *are* tossing a couple extra bucks into our account – thank you!

- Please don’t assume any prices or plans mentioned in this book are necessarily current – this stuff changes often. This book isn’t intended to be a price comparison guide, and we only use prices as examples as they are relevant today. It’s almost a guarantee that as soon as we publish this book, some of those details will be immediately outdated.

- Although we do provide some technical and installation advice, please always consult with the product’s vendor or manufacturer for direct support.

Armed with the information in this book, you will be much better equipped to understand and evaluate the current offerings on the market – and to decide what plans and technologies personally fit you best.

Our goal here is not to give you a shopping list for the singular perfect mobile internet setup – it is to arm you with the information you need to write your own.
Laying the Groundwork

First off – if at any point you come across any terms in this book that are at all unfamiliar to you, stop and check the glossary at the end!

We have written a comprehensive glossary that defines even the most technical terms in ways that anyone can understand. So before you get frustrated wondering why you might need a POE to power your CPE to get remote 802.11g when you’d really rather have more dB on your LTE – check the glossary, and soon it will all make sense.
Basic Differences Between the Common Options

There are multiple ways to access the internet while on the go these days, and each of them has attributes that make it more attractive than the others.

Public WiFi hotspots are often free or low cost, but they can vary vastly in quality and are frequently too overloaded to be a reliable source. Unless you’re willing to take your laptop closer to the physical hotspot, you may need additional gear to get a usable signal from the comfort of your RV.

Cellular data is quite prevalent and has gotten amazingly fast – and is now even available in sometimes surprisingly remote locations. However, it’s typically priced by how much you use, which can add up fast. You might need extra equipment or boosting gear to optimize utilizing cellular in remote locations. You’ll need to select your carrier(s) and equipment wisely to best match your planned travel destinations and routes.

Sometimes signal just simply is not available though, especially as you leave populated areas.

Satellite can be picked up anywhere with access to the southern sky, even remote locations and across borders into Mexico and Canada – but satellite internet comes with a host of drawbacks, including speed (or lack of it), price, latency, and complexity.

More than likely, most RVers will create a personal arsenal that combines multiple options.

Here’s a quick grid that shows the benefits of the primary ways to getting online:

<table>
<thead>
<tr>
<th></th>
<th>Unlimited or Capped</th>
<th>Mobile Friendly</th>
<th>Cost</th>
<th>Speed</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable/DSL</td>
<td>(Usually) Unlimited</td>
<td>Not mobile. Fixed location.</td>
<td>Reasonable</td>
<td>Fast!</td>
<td>Always on</td>
</tr>
<tr>
<td>Cellular</td>
<td>Capped</td>
<td>Fully mobile – wherever there’s signal!</td>
<td>Pricy</td>
<td>Slow to fast (Faster all the time!)</td>
<td>Varies by location</td>
</tr>
<tr>
<td>Public WiFi</td>
<td>Variable</td>
<td>You hunt signal at each location</td>
<td>Free to cheap</td>
<td>Highly variable</td>
<td>Highly variable</td>
</tr>
<tr>
<td>Satellite</td>
<td>Capped</td>
<td>Fully mobile – wherever there's southern sky</td>
<td>Pricy to beyond pricey!</td>
<td>Slow and high latency</td>
<td>Can be persnickety</td>
</tr>
</tbody>
</table>
Cellular vs. WiFi

By far the two most common ways that RVers will be able to get online is via either a cellular data connection or via campground or another public WiFi network.

But – one of the most basic questions we occasionally get asked – just what exactly is the difference?

We’ll be going into much more detail about both cellular and WiFi later in this book, but for those of you starting at square one, here is the basic breakdown:

**WiFi** – This is a short-range local wireless network technology that is built into all modern laptops, smartphones, and tablets. Via WiFi, you can connect to a nearby hotspot that is at most just a few hundred feet away (without special equipment). In general, WiFi connections tend to be free, but there are some paid ones. A hotspot may be one you create and host yourself, or it may be one provided by a campground, cafe, library, or hotel. The hotspot itself is providing access via whatever its own upstream internet source is – cable, DSL, satellite, or even cellular.

**Cellular Data** – This is a longer range data connection established over the same basic wireless network that carries cellphone voice calls. All smartphones, some tablets, and a very few laptops have cellular data capabilities built in. When using cellular data, you are talking to the internet via a cell tower that is typically up to 5 miles away, but in a remote area the tower may be 15 to 20+ miles away, and in a busy urban area there may be cell towers located every few blocks, or even inside buildings. Cellular data is rarely free.

Sitting squarely between cellular and WiFi are mobile hotspots, which are cellular data device that create a small WiFi hotspot that other nearby devices can use to get online, sharing in the cellular data connection. A smartphone or tablet can usually create a personal hotspot that functions like this to share its connection, or a small dedicated device called a MiFi, Mobile Hotspot, or Jetpack can do the job too.

The radios involved and technologies underlying WiFi and cellular data are different – a cellular booster is not going to help you pull in a WiFi signal from farther away, and extended-range WiFi equipment will do nothing to improve your cell phone reception.

And needless to say – cellular and WiFi radios are completely different and not compatible with TV antennas either.