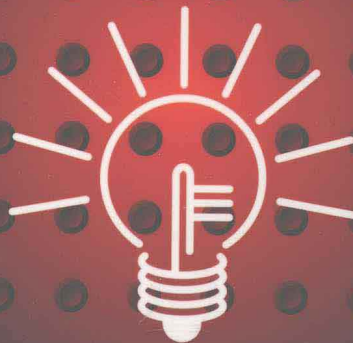


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DEMYSTIFIED

- Plain English explanations of technology, markets, and management issues
- Contributions from many companies in the mobile data industry



JOHN HOFFMAN

GPRS Demystified

John Hoffman, Editor

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This book is dedicated to the men and women who have toiled to make GSM a global success, from which to implement this “thing” we call GPRS; to the subject matter experts who have so kindly given of their time and talent by contributing to this book; and to Kirsten and Remy who are just beginning their quest for knowledge...

PREFACE

Can GPRS be Demystified?

When general packet radio service (GPRS) was first conceived, it was fuzzy in terms of hard details, even for those who envisioned it as the beginning of the GSM evolution to an all-IP packet data service. Over time, GPRS became clearer in the minds of the “enlightened,” who heralded it as a major first step in the move from circuit-switched wireless services to an always-on service with bits of data sent to and from devices at lightning speeds.

As the world began buying into the idea of the “Mobile Internet” (read, enabled by GPRS) accessible via inexpensive handheld wireless devices, something happened. Nothing. Real or apparent momentum slowed to a crawl and the GPRS we envisioned didn’t happen. Everything got fuzzy again.

OK, GPRS was heading in an unforeseen direction. But change at this point proved to be a good thing, bringing with it evolution, movement, and the kind of advancement that only comes from a step back. If GPRS wasn’t a bullet train to the future, we needed to demystify some of our own assumptions and expectations. Today no one is prepared to claim that she or he really knows what is going on in the world of GPRS, but here you can find perspective on problems and opportunities. If you read this compilation of some thirty chapters by practicing GPRS subject matter experts, all contributing their thoughts to the GPRS puzzle, you will have learned a lot about GPRS in particular and something significant about technology in general.

What do we know now about how things will play out tomorrow? Well, it will rain when we think it will be clear, be calm when we have a kite to fly, hot when we dress for cool weather and stressful just when

we need a break. GPRS will never be what was first envisioned, but it's undeniable in the way a hit song is undeniable. It's easy to glom and hard to forget. It means many things to many people. It's an efficient, even an elegant platform for the multitude of applications we conjure up when we try to explain how wireless mobility will change the way we live. In some respects, the link between GPRS and tomorrow is stronger today than it ever was in the past.

There is this "thing" someone named GPRS or GSM Packet Radio Service, and I can only hope that whoever came up with the name was not a marketing genius gone mad, but rather some techie preparing a paper on packet services—because GPRS is indeed an innovator's innovation.

We undertook this book in the hope that it will give you ideas. I, for one, am still dumbfounded by the ability to transmit 1's and 0's over the airwaves such that folks like you and me can use wireless devices to make our lives more productive, or less stressful, or whatever "better" means in your vocabulary. It could be blinding fast downloads, total uninterruptible access to messages that matter, or freedom from tethers and wires. Or it could be the ability to send and receive important information wherever we may be without having to worry about whether it works or how it works. It sounds like magic, and is sometimes described that way, but actually today it's GPRS—at least for the world of GSM users.

So here is my advice:

Don't Read This Book.

At least in the typical sense of reading a book because this really isn't a book. It is more of a reference manual. A grouping of essays, vignettes, snippets of mature thoughts on specific topics, but not really a narrative. I don't say this just because the editor is not an expert on any particular subject, or because I tend to write in a stream of consciousness barely bounded by capital letters, commas, periods and conjunctions. But this format really is peculiarly useful for recording technology life-cycles. Let me explain.

Maybe by now you have bought into my theory that no one really knows GPRS. This theory is based upon my belief that the moment when something comes clear usually ushers in the moment when everything changes. According to this theory, which I really do espouse, the times in between when much is fuzzy are really the productive times, the good times when everyone is energized as a technical community. Some aspects of GPRS have or will soon come into focus and stay that way. Other aspects of GPRS will move in and out of focus, perhaps

repeatedly. This “book” tries to identify *those* aspects of GPRS and outline their importance. This means that one reader may believe the author has presented a sound and plausible story about GPRS while another reader will vehemently disagree.

Why should you read the “book” which isn’t really a book? Because if the “we” who put fingers to keyboard have successfully done our job, our words will evoke debate or at least contemplation. Because GPRS is really a quantum leap forward, measured as both a technology and a way of communicating. If GPRS really rewrites our interaction with information, much as the PC did ten years ago, I won’t be surprised. If I fail to evoke such thoughts from you, I won’t be communicating.

So for the three or four readers who have gotten to this point, I both congratulate and worry about you both in the same breath. You are probably one of the targeted readers, those who are between the ages of birth and death, male or female, interested in better understanding what makes GPRS go and even a little bit about how it works. You may be in the “wireless industry,” but you may not be technically literate. Although this is a work about technology, it isn’t a technical work. This is good as this isn’t intended to be a technical book. And if you are not in the wireless industry, all the better, as you won’t be bringing hearsay and hype along with you.

This is not to say that some parts are not technical; they are. Certain subjects that make up the GPRS story must be founded on technology or nothing works. We try to highlight them without getting bogged down in the nuts and bolts and jargon. Some of it (maybe more than is necessary) may get boring. When that happens, skip it and move on. Or better yet, pick up *GPRS Demystified* and read a few pages of a chapter that holds some interest to you. Then put it down and let it lie for a while—enough time for the thoughts to bounce around your brain or be filed away for future reference. Then pick it up again...

Inside you will find information about the three components which have to be present to make GPRS work: the infrastructure or underlying technology, the terminal devices to access the technology, and most important, the services or applications which run over the technology. Taken together, these three components define a commercial GPRS service offering. Without all three, the others are useless. Without the fourth “component,” a well-conceived business proposition, commercial success is unlikely. The overall business proposition of GPRS has to begin, as maybe it always did, with the concept of an end-to-end service constructed for optimal simplicity. Therein lies the real challenge for GPRS success.

I conclude with a special thanks to you, the reader. You have taken a leap of faith in picking up this book, hopefully as part of a rational act. You are to be commended for your actions, or perhaps cautioned for your lack of sound judgment. And you should know one more thing: your purchase will never earn myself or the authors who contributed their time and talents to the writing of *GPRS Demystified*, one euro, dollar, shekel, or kroner. All proceeds that may come our way will be donated to charity. We didn't do this for the money, for the glory, or because we wanted to write a book. We did it to help advance a new and critically important part of the GSM family of technologies. GPRS. Which, if we as a GSM community get it wrong, will relegate a perfectly good technology like GSM to the status of a has-been. As a collective body, we don't believe such will be the case. Thus, everyone agreed to contribute their knowledge to make this project a reality. And much like GPRS itself, *GPRS Demystified* has been fraught with life's ups and downs, but the dream never died, maybe because nothing good in our world is ever easy.

John Hoffman
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CONTENTS

Preface	xvii
PART 1 INTRODUCTION TO GSM NETWORKING	
You May Know GSM, but Do You Know How It Came About and Where It Is Going? (...and Should You Care?)	2
How GSM Grew	3
The GPRS Mission	6
Chapter 1 Global Domination of GSM	11
Seducing the Consumer	15
Standing the Test of Time	16
Chapter 2 Roaming Across Borders	19
What on Earth Did We Do before GSM?	20
In the Beginning...	21
First-Generation Cellular	22
One Giant Leap to GSM	23
Roaming and Roaming Agreements	23
GSM Phase 2 Enhancements	24
A Global Success	26
Chapter 3 Short Message Service and GSM Circuit-Switched Data	27
What Is It and How Does It Work?	28
The SMSC	29
Message Structure	29
Keying Input	30
What Is It Good For?	30
Current Application Trends	31
High-Speed Circuit-Switched Data	33
Terminals and Applications	35
PART 2 A PERSPECTIVE ON GPRS ADOPTION AROUND THE WORLD	
Some Artifacts of History (Some Real, Some Myths, but All Written Here So They Must Be True)	38

Chapter 4	GPRS Market Demand and Key Drivers	41
	Key Data Services	43
	Messaging	46
	Entertainment Services	47
Chapter 5	Market Positioning	49
	Revolution and Evolution	50
	GPRS Is “Just” a Bearer Service	50
	Who Are the Actors?	54
	A Reference Architecture	55
	Follow the Money!	59
	Now, Who Teams with Whom?	60
	Bit Pipe	61
	Partnership	62
	The Walled Garden, or the I-Mode Model	63
	Other Models	64
	Wholesale versus Retail, Vertical versus Horizontal, Customer versus End User	64
Chapter 6	The Enterprise Business Model	67
	Product Offering	68
	Mobile Intranet/Dedicated APN	68
	IP-VPN	69
	Hosted Enterprise Portals	70
	Telematic Solutions	70
	Positioning	71
	Addressed Segments	71
	Competing Technologies	72
	Pricing	73
	Volume-based versus Time-based	73
	Nontraffic-related Charges	74
	Service Level Agreements	75
	Promotion	75
Chapter 7	GPRS in the Mass Market	77
	Positioning	78
	Product Offerings	80
	Practicalities and FAQs	81
	How Will I Perceive the Benefits of GPRS?	81
	So What About the Prices?	82
	How Different are GPRS and WAP?	83
	What is the Difference between GPRS and UMTS?	84

Chapter 8	Portals	85
Wireless Portals		86
Fixed-Wireless Portals		88
Club Nokia		88
Service Providers		89
ISPs and MNOs		90
ASPs and WASPs		90
WAIPs		91
Content		92
Conclusion		93
PART 3	GPRS FOR DUMMIES LIKE ME (AND MAYBE YOU)	
The Business Proposition		96
Real-World Economics		96
Why It's Ultimately Worth Doing		97
Where to Begin		98
Packets over Wireless		99
Evolution of Security		100
Conclusion		101
Chapter 9	Cool High-Speed Data Services	103
GPRS Data Services		104
GPRS Infrastructure and Components		105
Air Interface Upgrade		108
Base Station Subsystem Upgrade: Packet Control Unit		109
All New: Serving GPRS Support Node (SGSN)		110
All New: Gateway GPRS Support Node (GGSN)		111
True Confessions		111
Appendix		
The Insomniacs Guide to GPRS Specifications		112
Chapter 10	Planning and Dimensioning	115
Frequency and Coverage Planning		116
Capacity and Growth Dimensioning		118
Capacity Dimensioning for the Air Interface		118
The Capacity-on-Demand Concept		118
Case 1		121
Case 2		121
Case 3		123
Core Network Dimensioning		124
GPRS Network Optimisation		125
GSM Network Optimization		126

Value-Added Services	127
Integration of Value-Added Services in the GSM Network	127
Chapter 11 Implementation and Testing	129
GPRS Infrastructure and Components	130
GPRS Speeds and Handsets	131
Base Station Subsystem (BSS)	132
Switching Sub-System (SSS)	133
GPRS Backbone Network (GBN)	133
SGSN	135
GGSN	137
Basic Functionality	137
The GGSN Major Interfaces	137
Security	138
IP Address Management	139
Planning GPRS Configurations	140
GPRS IP Backbone (Core) Network	142
Element and Network Management	143
Interoperability between Components and Manufacturers	143
Internet and Corporate LAN Connections	144
Security	145
Billing System Connection	146
Installation and Acceptance Testing	148
System Optimization	149
Chapter 12 IP Addressing	151
Types of IP Address	152
In the Beginning...	152
Growth Problems	153
Network Address Translation (NAT)	153
The Story Today...	155
The Light at the End of the Tunnel: IPv6	155
Internet Registries and Requesting IP Addresses	155
IP Addressing for the GPRS Network	157
GPRS Network Infrastructure	157
Radio Network	158
Core Network	158
IP Addressing for the Core	158
Mobile Terminal Addressing	159
Terminals and PDP Contexts	159
IP Address Allocation Mechanisms	160
Fixed Addressing	160
Dynamic Addressing	161
Transparent and Nontransparent Access	164
Customer Network IP Address Ranges	164

The Terminal Addressing Problem	164
Dialup Internet Access	165
Usage Pattern of IP Addresses by GPRS	165
Number of IP Addresses for Terminals	165
Tackling the Terminals Addressing Problem	167
Summary of Grouped GPRS Users and Applications	167
Direct Corporate LAN Access	169
Internet Access—WAP Only	169
Internet Access—WAP and Popular NAT-compatible Applications	169
Internet Access—Open Internet Access	170
Internet Access—Internet Service for Roamers	170
Addressing Policy	170
Infrastructure Addressing	171
Mobile Terminal Addressing	171
Autonomous System Number (ASN)	172
Transition to 3G	172
Transition to IPv6	173
When?	174
IPv6 Features and Benefits	174
Impact on Terminals	175
Dual Stacking	176
Tunneling and Interworking	177
Application-specific Interworking	178
Roaming Considerations	178
Core Infrastructure	179
Summary	180
References	180
Chapter 13 Access Point Names	181
Services	182
Functionality	183
Structure	184
Value	186
Chapter 14 GPRS Security	189
Security Features of GPRS	190
Identity Confidentiality	191
Identity Authentication	191
User and Signaling Data Confidentiality	191
The Algorithms	192
The Authentication Process	192
End-to-End Security Connections for Services	193
Network Security	194

The Internet	195
Viruses and Trojans	196
General Security Considerations	197
Fraud Issues	198
A Final Word	199

PART 4 IT'S THE APPLICATION, STUPID

Chapter 15 WAP and Lessons Learned 207

WAP Forum	208
Objectives	209
General Architecture	209
Protocols	210
WAE Layer (Wireless Application Environment)	211
WSP Layer (Wireless Session Protocol)	211
WTP Layer (Wireless Transaction Protocol)	212
WTLS Layer (Wireless Transport Security Layer)	212
WDP Layer (Wireless Datagram Protocol)	212
Interfaces	212
How to Access WAP Services with a Handset	212
Success Factors	214
Customer Demand–Market Demand	214
Ease of Use	214
Connection Time and Bandwidth	215
Improved Standardization	216
Will GPRS Renew WAP?	216

Chapter 16 M-Services 217

Why M-Services?	218
What is M-Services Phase I?	221
Usability	221
WML 2/XHTML Browser	221
WML Extensions	222
Human Machine Interface (HMI)	222
Configuration and Provisioning (OTA)	222
M-Services Key	223
Display	223
Memory	223
Additional WAP Requirements	223
Download	224
WSP/HTTP GET in WAP1.2	224
Download Fun	224
Download Object Definitions	224
Presentation	224