m-Profits

Making Money from 3G Services

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Independent Consultant, UK

JOHN WILEY & SONS, LTD

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Reviews of *m-Profits:*

''Just like the book *Services for UMTS*, this book offers a very interesting perspective on the dynamics of mobile money making. It is particularly interesting because it attempts to deal with the wireless industry at the moment of the sector's global recession and retreat. I am sure the book will be a good read not only for academics but also for industry professionals, operators, bankers and analysts.''

Voytek K. Siewierski, Executive Director
Global Business Department, NTT DoCoMo Inc.

''This is the first book I have seen to discuss the money side of the 3G opportunity, with very thorough coverage from the angles of the major players. This book gives practical guidance on creating win-win opportunities to bring content and satisfied users to 3G.''

Steve Jones, Founder
the3Gportal.com

''*m-Profits* is one of very few books on 3G services and the only one to give a comprehensive view of the issues of marketing and revenue. It is a useful tool for 3G professionals and amateurs alike.''

Sophie Ghnassia, GPRS & UMTS Project Director
France Telecom

''In this book Tomi Ahonen illustrates a solid understanding of how money will be made in 3G with corporate solutions, m-commerce and mobile advertising.''

Paul May, Principal Consultant and Founder
Verista; Author of *Mobile Commerce*
and *The Business of E-Commerce*

''*m-Profits* is a detailed, down to earth book and a great guide to the ABC of making money in mobile services.''

João Baptista, Vice President
Mercer Management Consulting

''In this book, Tomi Ahonen has made complex theories easy to understand, using practical examples from the leading innovative countries in the world, which can be applied in telecom markets in Europe, Asia and North and South America.''

Mark S. Weisleder, Director Channel Development
Bell Distribution Inc., Canada

About the Author

Tomi T Ahonen is an independent strategy consultant on 3G/UMTS and the mobile internet. A frequent speaker at industry conferences on five continents, Tomi has been quoted over 80 times by periodicals on 3G topics. Previously he set up and headed Nokia's Global 3G Business Consultancy department and set up the segmentation for Nokia Networks.

Earlier he has worked for three operators/carriers in Finland and New York, creating the world's first fixed-mobile service bundle, and setting a world record for taking market share from the incumbent, as well as participating in telecoms standardisation for several years. Tomi has also sold computer networks and services on Manhattan. He started work as a controller on Wall Street. Tomi holds an International Finance MBA (with Hons) from St John's University New York. For more see www.tomiahonen.com

Other books by Tomi T Ahonen:

Services for UMTS: Creating Killer Applications in 3G
Edited by Tomi T Ahonen & Joe Barrett
(John Wiley & Sons, Ltd, Mar 02, 0471 48550 0, 392pp, Hbk, £34.95)

Services for UMTS is devoted to 3G services and provides detailed scenarios for over 170 of them. Written by 14 of the world's leading experts on 3G services, applications, networks and terminals, it discusses the characteristics of mobile services, introduces the 5 M's of how to create value in mobile services and includes chapters on categorising, marketing and partnering. Written for the non-technical reader and with a strong business focus, *Services for UMTS* includes illustrations, statistics, diagrams, analogies from other industries and realistic service vignettes.
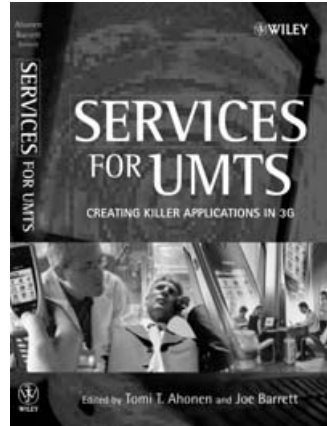
Reviews of Services for UMTS:
''*Strong ideas for future demand*'' Mike Short, mm02.
''*A must read if you want to understand future services*'' Roberto Saracco, Telecom Italia Lab.
''*Manage the $1 trillion bet on the success of 3G*'' Assaad Razzouk, Nomura International plc.
''*Explains some of the compelling services in the wireless industry*'' Jeff Lawrence, Intel.
''*Insightful discussion into service possibilities*'' Dr Stanley Chia, Vodafone USA.
''*Most comprehensive work on the subject*'' Regina Nilsson, PwC Consulting.

3G Marketing: New Strategic Partnerships
by Tomi T Ahonen, Timo Kasper & Sara Melkko
(John Wiley & Sons, Ltd, available Nov 02, 0470 85100 7, approx 340pp, Pbk, approx £29.95)

3G Marketing discusses the full marketing and sales side of new wireless services including customer intelligence, segmentation, service creation and management, tariffing, promotion, distribution channels, sales management, portals, brands, reachability, terminals and managing churn.

For more information and ordering details for both books please visit our website at
www.wileyeurope.com/commstech

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Foreword

I was deep in thought as I returned from Japan this June. I had been introduced to NTT DoCoMo's third generation Foma services that have been available for close to a year now as well as to the Sha-Mail picture messaging offered by J-PHONE/Vodafone. I was considering the difficult contradiction surrounding the global telecommunications industry. Already functioning in Japan, and being introduced elsewhere, the advanced world of third generation wireless services is a fascinating and imaginative challenge limited in its opportunities only by our abilities to conceive.

However, at this moment consumers seem to have an unwillingness to use, or even a difficulty to use all of the new mobile services and advanced terminals being offered by the industry and the operators.

To describe the market with one word that fits people's lives, that word for the ICT markets today is pain. The foremost reason for the pain seems to be how the industry has become blind to the technology-led way of building the market. The opportunities created by technology in itself have driven to fast, badly timed and, when considered by their magnitudes, perhaps even too massive investments. The day-to-day behaviour and communcation of people and the significance of real needs have been left unseen.

We live in a time of paradox. I do not see any signs around the world of an

end to the development of the information society and the digitalisation of various content and services as well as the use of internet-based access, nor that the vision of an information society would be approaching any type of crisis. On the contrary. The development continues strongly but the schedules are different from the guidance provided by forecasts of the companies involved and the industry.

A few weeks after my trip to Tokyo I received surprising e-mail messages from South Korea, which was the other host of the World Cup of football. My friend sat in the new stadium in the city of Suwano and punched up highlights from the game on the keypad of his new colour screen camera phone. And it worked. Inspite of a stadium filled with people, massive amounts of telecoms traffic and other technology, the picture messages arrived very well via e-mail after a little bit of experimentation.

Wireless communication certainly has a bright and successful future. New services and methods of communication based on advanced network technologies and high quality access methods are creating new uses and markets.

As he writes about and evaluates the possibilities and future markets for mobile services, Tomi T Ahonen holds his finger at exactly the appropriate pulse of our times. In fact he knows how to put in proportion the 'pain' felt by the ICT industry and drafts a roadmap away from the pain and ahead for the market. The question no longer is about the role of new technological innovations but rather about how markets are created by innovations around functions and services.

History tells us that no technology alone and by itself has stayed alive and found a place in the lives of people. In addition to possibilities offered by technology, consumers must always identify some additional and real need in themselves, as well as the societal and social context to the services - without forgetting the environment of stories and brands arising from culture and consumption.

I hope that this book by Tomi T Ahonen will stimulate its readers and open the vision to the wireless and mobile communications of tomorrow. It is there after all.

<div align="right">

Helsinki, August, 2002
Teppo Turkki
Executive Advisor
Elisa Communications
teppo.turkki@elisa.fi

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*'In life you throw a ball. You hope it will reach a
wall and bounce back so you can throw it again.
You hope your friends will provide that wall.'*
Pablo Picasso

Acknowledgements

Without Whom This Book Would Not Have Been Possible

There are so many who have had an influence on me and made this book possible. I want to start by thanking Renee Brinker, who taught me to love language; Tapani Leppälä who guided me to creativity; Barry McCauliff who developed my skills in analysis; and Joe Grunenwald who taught me ''everything'' about marketing. You four set the stage for me to succeed. Thank you also to my partners at the debate teams at Clarion and St John's, especially Dana Murphy and Jeff Lynch; and Robert Abiuso and Mary Colletta respectively. At OCS in New York I want to thank Todd Stevens, Otto Cruz and Aaron Weinstein.

At Helsinki Telephone and Finnet my strongest support was always Matti Tossavainen, thank you. Thank you also Juha Malmberg, Pekka Eloholma, Mikko Lavanti and Gunnulf Martenson. From our team, I want to thank Minna Rotko, Olli Rasia, Tiina Kovero, Nina Lahdesmaki, Tarja Aarnio, Jouko Viitanen, Anne Nikula, Pertti Soitso and Raimo Kirjalainen; as well for guiding us Hannu Peltola, Mikko Heijari, Markku Lempinen and Ismo Heino. We broke records with our product, 999!

Throughout my career there have been a few people who have helped me in understanding the mobile future and its business in more visionary terms. I

<div align="right">Tomi T Ahonen
London 2002</div>

1

'The worst crime against working people is a company which fails to operate at a profit.'

Samuel Gompers

Intro to m-Profits:

Show me the money

The Mobile Internet world is expected to be worth more than 1 trillion (1000 billion) dollars before this decade is over. Most of the services that will generate that revenue do not exist yet. This book looks at those new services with a focus on how money will be made in that new world, and about who will be making the profits.

While the future of mobile telecommunications is impossible to predict in a precise way, broad categories and general service ideas are emerging. Many of the futuristic proposed services are emerging in simplified versions around the world, such as making payments by mobile phone, receiving news, mobile banking, games, etc. As mobile services are evolving fast, a comprehensive description of what is currently available would be out of date by the time this book is printed. So rather, a few illustrative examples of real services are discussed at the end of the five service chapters. For those who would want a deeper discussion of how services are created in next generation networks, please refer to the book *Services for UMTS*, edited by Ahonen and Barrett (John Wiley & Sons, 2002).

This book is about making money with new mobile services for new networks. The number of users on mobile networks has been growing at a phenomenal pace during the last decade and while growth rates are projected

to slow, subscription penetration rates are now projected to grow well past 100%, meaning that many people will have two mobile phones. This development is seen in the projection of Western European mobile phone subscribers by JP Morgan.

European cellular subscriber cumulative growth and net growth per year, JP Morgan Report Mobile Matters March 2001
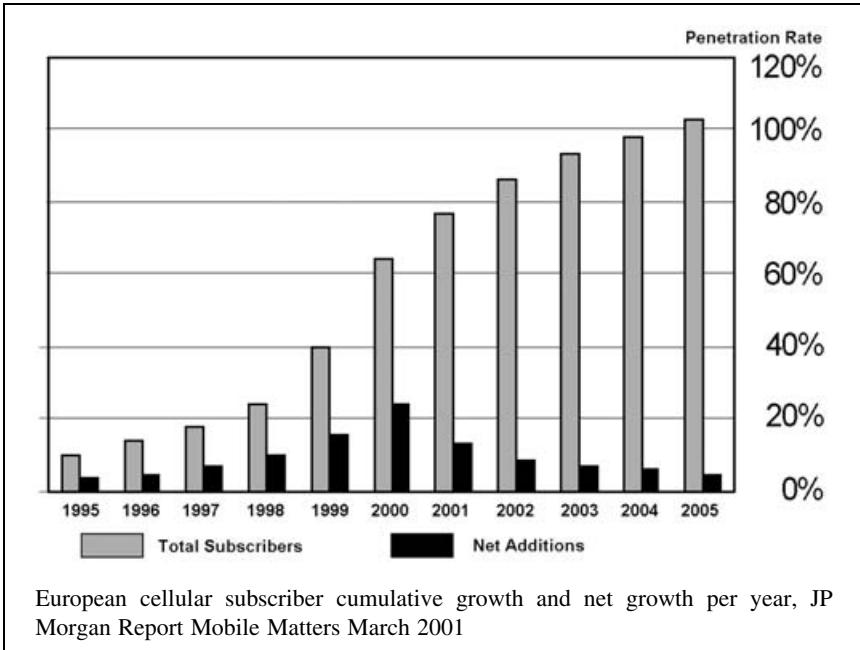
The industry on the whole is very young. The cellular telecoms industry started in Japan in 1979, the Internet emerged as a mass-market service through Internet e-mail and web browsers in the early 1990s, and the mobile Internet started in Finland in 1998. The first commercial 3G network went live on 1 October 2001 in Japan. The 3G world is the most powerful mobile Internet environment and in it the telecoms and datacoms worlds combine the speed and dynamics of the growth seen in the fixed Internet and the cellular telecoms businesses in the 1990s. As the industry is growing so fast, more is unknown than known at this stage. Still, this book attempts to look at where the early money is.

This book starts with the mobile phone (cellular phone) as a personal device, and shows how we relate to it. The book then examines attributes of 3G services and examines the concept of micro-payments, and then discusses the Ahonen–Barrett theory called ''The 5 M's of 3G Services'' on how to build value for

profitable 3G services. Next the book covers service ideas in five chapters which each describe 3G services in detail, showing also who will be making the money. At the end of the book, there are chapters on traffic patterns, money migration, the marketing of 3G services, revenue sharing and partnering, competition, the 3G network operator (wireless carrier) business case, and the future beyond 3G. In the Appendix, there is a glossary, bibliography, listing of useful websites, as well as a services listing and an index.

1.1 Soup du jour is alphabet soup

While not a technical book, inevitably there will be the assortment of abbreviations in alphabet soup. Let us start with 3G. By 3G, this book means next generation mobile networks to distinguish from first generation (analogue) mobile networks such as NMT (Nordic Mobile Telephone) and AMPS (American Mobile Phone System), and second generation (current digital) networks such as GSM (Global System for Mobile Communications), TDMA (Time Division Multiple Access) and CDMA (Code Division Multiple Access). A close synonym of 3G is UMTS (Universal Mobile Telecommunications System).

Many other terms exist that are close synonyms for 3G and individual readers may be more familiar with some of these terms. IMT-2000 is the initial standard defined by the industry for the high capacity mobile network. WCDMA (Wideband CDMA or Wideband Code Division Multiple Access) is one of the leading standards for 3G being deployed worldwide. CDMA 2000 is the other leading standard and varieties of it include 1XRTT, 1XEV-DO and 1XEV-DV. When this book talks about 3G, for practical purposes any of the above could be substituted, even though technical distinctions exist to differentiate between the terms.

Sometimes the term 'mobile Internet' or 'wireless web' is used to describe the future networks. These terms are much broader than 3G, and usually include 2.5G technologies such as WAP (Wireless Application Protocol), GPRS (General Packet Radio System), HSCSD (High Speed Circuit Switched Data), EDGE (Enhanced Data rates for GSM Evolution) and even may include 2G technologies. For most of the services described in this book, there is no inherent requirement for 3G, and most of the services could be offered on 2.5G networks, and can be called mobile Internet services, or wireless web services, or simply mobile services. One of the key differentiating factors introduced by 3G, is 'Quality of Service' or QoS as was explained by Holma and Toskala in their book *WCDMA for UMTS*. QoS classes are illustrated in Table 1.1.

Table 1.1 UMTS Qos Classes

Traffic class	Conversational class	Streaming class	Interactive class	Background
Fundamental characteristics	Preserve time relation (variation) between information entities of the stream Conversational pattern (stringent and low delay)	Preserve time relation (variation) between information entities of the stream	Request response pattern Preserve data integrity	Destination is not expecting the data within a certain time Preserve data integrity
Example of the application	Voice, videotelephony, video games	Streaming multimedia	Web browsing, network games	Background download of emails

1.2 For whom

This book is intended for the marketing, sales, service creation, pricing, partnership and content managers at operators (carriers), service providers and content providers. It is intended to give a general view of the types of services, revenue streams, profit sharing and other aspects of 3G business. While it may seem like a collection of service types, this book is written too early in the industry to be a comprehensive 'catalogue of services'. It is intended to be a thought-provoking sampling of some of the developments in 3G services and help set up the revenue sharing dialogue amongst the various players in creating successful and profitable mobile services.

1.3 Usage

There are several specialist vocabularies that might come into conflict in a book about a converging world such as 3G. There is a distinct telecoms vocabulary quite different from a datacoms vocabulary, for example telecoms might call something a 'switch' while the datacoms world would identify the same device as a 'call processing server' and so forth. Similarly, there is a clear difference between American telecoms usage and British telecoms usage, for example Americans calling something Toll Free Calls, while the British call the same Freephone calls, and so forth. I have worked in datacoms and telecoms, in America and Europe, and personally use a mixture of the languages. For this book to be consistent, I had to select one usage and try to be consistent in it. As 3G is happening in Europe before America, and the defining and distinguishing aspects of 3G are cellular (telecoms) networks, rather than data networks, I ended up selecting British telecoms usage. I apologise to all American and datacoms readers, but ask that you kindly substitute your appropriate terms when needed. Nevertheless, in practical terms, when I say 'mobile operator', Americans should read 'cellular carrier' and so forth.

Many of the issues in this book relating to new services and their usage may seem silly, strange or against all logic to those of us who are over 40 years of age. Remember that 3G is all about the future, and those who will be living it to the fullest are about age 20 today. If you have teenage or college-age children, observe their behaviour and relationship with their mobile phones and any new services. Never think of yourself as a typical 3G user, but rather consider would your children be interested in any given service – or willing to pay for it.

1 Vignettes from a 3G Future: Music Messages

Not long ago my friends would send me SMS (Short Message Service) text messages to ask me if I had heard the latest song of whatever band was hot at the time. Now it's much better, in that they send a part of the actual song, as a multimedia message. It's a great way to share in the new music, and of course these forwarded sound clips have the omnipresent 'click-to-buy' buttons so that if I like the song, I can have it directly downloaded to the MP player on my phone.

A new promotional tool for the music industry will be the click-to-buy musical ads. They will be in the form of a short 30–45 s section of a current song in technically simple format. The ads would include a click-to-buy button to download the whole song in CD quality on to the mobile phone or other device. The musical ads could be sent to registered fans of the bands, and these fans would then spread the ads through viral marketing. As promotions, the cost would only involve the initial musical messages, as the fans would pay for the cost of any forwarding of the messages. Compared with other ways of music promotion, this method would yield a huge saving in cost, and better than any other promotions, enable immediate call to action.

Youth lead the way: in Finalnd already by 1999, over 80% of the under 30 years old population placed most of their calls on mobile phones.
Source Tilastokeskus Three Years in the Information society, July 2001
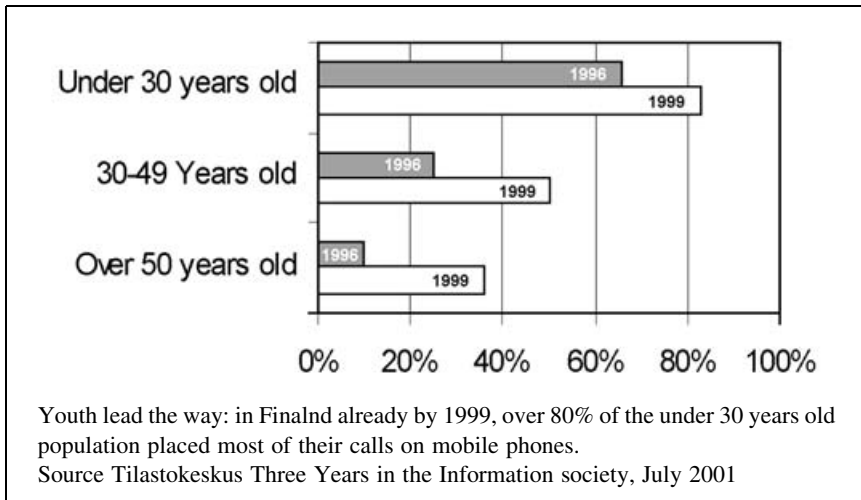
The youth represent the future especially in 3G and in this book I have tried to bring in latest studies relating to youth adoption and usage of mobile phones. For example Tilastokeskus in Finland has studied how people of different ages place calls on mobile networks and found that of the under 30-year-old group, already 80% place most of their calls on mobile phones. It may seem strange to the older populations, but the youth have always been the first to adopt new technologies and often their behaviour has been judged by their elders as 'a stupid waste of money' – yet they bring their familiarity with new technology with them into the workplace.

1.4 Start me up

This book is a collection of service ideas for 3G, trying to cover them as broadly as possible in one volume, from the viewpoints of not only the 3G network operator, but also the other parties necessary to deliver the service(s). To keep the book in some kind of focus, I have tried to focus on where the money is. Also for those who have read *Services for UMTS*, a similar structure is used, and the two books can be considered companion volumes. *Services for UMTS* answers the 'what' while *m-Profits* answers the 'why' of 3G.

Of course in the final analysis this is a book about the future and is prone to all mistakes that anybody can commit in making predictions about the future. What I hope to accomplish is to bring insight, understanding and inspiration

to those who are considering business opportunities in 3G. This is the new world, we need you there. Moreover, it is a vast opportunity where money will be made and where innovation will be the early key to success all over the world. It will not be easy, and there will be numerous failures of individual services. But there will also be phenomenal success stories just waiting to be told. Understanding a new emerging technical standard, and the opportunities it can provide, is not easy. The overall opportunity, however, is so great, that I am reminded of Albert Einstein who said: ''In the middle of difficulty lies opportunity.''

2

'Get your facts first, and then you can distort them as much as you please.'

Mark Twain

Characteristics of Mobile Services:

What makes them different

The 3G service environment is very different from traditional telecoms services, and the 3G environment will be very similar to the fixed Internet mindset in speed, trial and error, and rapid innovation. To put it in perspective, a typical mobile operator in the year 2000 ran about a dozen or two dozen services. These included the basic voice call, the international voice call, the roaming voice call, data access for PC connection, SMS (Short Message Service) text messaging, VPN (Virtual Private Network) numbering plan, friends and family pricing plan, home zone pricing plan, and some more. There really are not very many basic mobile phone services. With WAP (Wireless Application Protocol) the service portfolio easily expanded. But with 3G, the mobile operator will be managing *thousands* of services. As a small indicator, this book has about 180 services in all, and this book is only scratching the surface of the matter.

Building a large selection of services into its portfolio, the 3G network operator has to decide which services to launch and in what order. Some services are not likely to become very successful on 3G. One could build a value chain and partnership model to offer luxury automobiles or houses or

sailing boats for sale via the mobile terminal. These are not ideal for 3G, as they are not typically purchased spontaneously in a short amount of time, and the small screen would not make for an excellent presentation media, and mostly these kinds of luxury purchases have many 'touch-and-feel' aspects that are not easily replicated on a mobile phone terminal.

However, there are many aspects of 3G services that make for compelling services. Some of the main characteristics are described here.

2.1 Value in mobile services

For services on mobile networks, the first and most obvious value dimension is mobility itself and aspects relating to movement. Other commonly mentioned value dimensions are personalisation and timeliness, which are not exclusive to mobile networks.

2.1.1 Mobility

By using mobility and the various related attributes such as localisation of content and location awareness of services, the 3G network operator can provide services or content which are better for it. A typical example is the tourist guide such as where is the nearest cash machine, etc. Localisation relates also to the service language when you travel, providing services to you in your own language.

2.1.2 Services should be personalised

The personal attribute for a service makes it feel to the user that it is genuinely unique to that person. If one is a golfer, then services about golf, maps to golf courses, golfing weather, news about tournaments, discount coupons for golfing gear, etc. can be of use. Nevertheless, if that person does not care about tennis, then similar news, advertising and content about tennis is irrelevant. It is very important to build services for the particular interests of the user, and to try to focus the user's interests very precisely.

Many degrees of personalisation can occur. For example if the person likes fashion, then probably fashion news and advertising is welcome. If the person likes Italian shoes and handbags, and the fashion content can be filtered so precisely that not even French shoes or Italian scarves are included, the more personal it becomes and thus more relevant to that user.

2.1.3 Timeliness

Timeliness is another dimension by which services can be improved. We all know from experiences on the Internet how sometimes a 'current' web page may contain out-of-date material, etc. The more timely the information is, the more valuable it often is. Of course, some information does not change much over time, such as geographical entries on maps tend to be relatively stable over time, and having a map update every 15 min would usually not have much added value. Then again, if the map happens to be a traffic congestion map in a traffic congested city at rush hour like Tokyo or Mexico City, then of course the map content could easily have new and very valuable updated information by the minute.

Most desired services on 3G phones, according to Nokia end-user study, source Nokia Mobile Entertainment Study, December 2001.
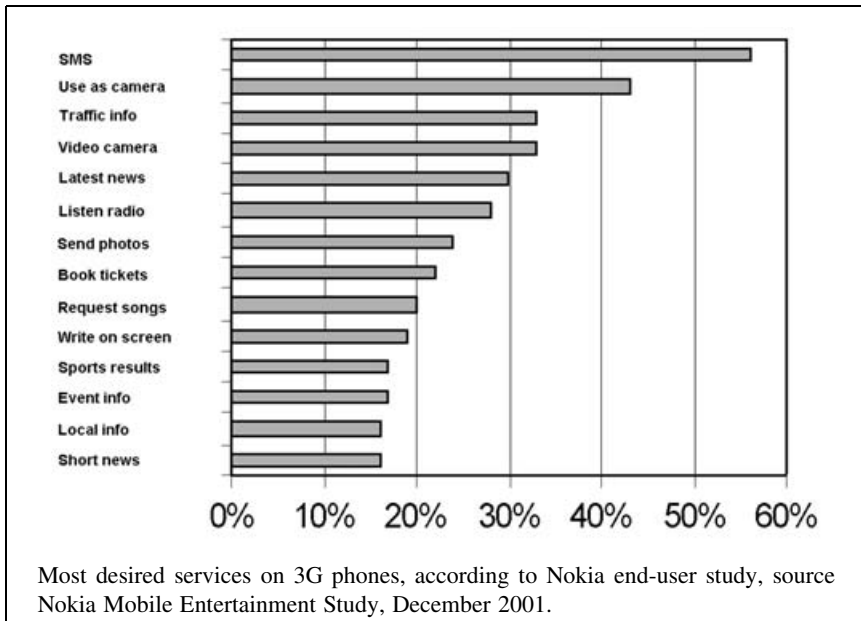
2.1.4 Time value of information/dilution value of information

With information, there is a strong time dimension to the value of information, which could be called the time value of information. Actually, the more relevant dimension is the dilution of information. The fewer people know something, the more the information has value. In addition, usually the information is spread out over time, which produces the time value effect.

A good example is stock market information. If you happen to catch a private conversation in an elevator that the company next door is about to announce a major patent, and you deduct from that knowledge that the stock price of that company will go up, you might go out and buy the stock. As the information is very narrowly spread, there is considerable value to it. If you told someone, that information would be still very exclusive and it would hold a lot of value. When the company issues a press release about it the following day, then all those who have fast access to such information, such as stockbrokers and those who follow the news feeds, can act upon the information. At that point you still might be able to get a favour from a friend by telling about the press release, but by now the information is with thousands and it has much less value. Moreover, in the evening when the TV news announces it, most of the interested population will have access to the same information. Any significant moves on the stock market will have been made, and as millions know the same information, it holds almost no value.

Services which can capitalise on the fast delivery of exclusive information, and can distribute it while its exposure has been slight, will bring value to those who want that information. 3G news and information services should be built to benefit from this attribute.

2.2 Other attributes of 3G services

There are still many other attributes of 3G services that need further discussion. These are not quite as uniformly applicable to all services but will have many cases where they can be applied. They are multitasking, multi-session, presence and text-to-voice. Most of the attributes for 3G services grow and evolve over time as we go through progressively more advanced systems. A general illustration of the generations was in Kaaranen's book *UMTS Networks*.

2.2.1 Multitasking

Multitasking is doing more than one thing at the same time. Mobile phones allow multitasking for example by walking and talking. You can carry on a phone conversation while you walk from the neighbourhood store to your home. Any places, occasions and situations where time is 'wasted' can be recouped with multitasking. These include all instances of waiting, queuing or temporary delays. In addition, any cases where some monotonous and low-level participation is needed, such as sitting on a bus or babysitting is ample opportunity for multitasking type solutions.