



3G is set to become a reality for SFR in 2004

Press release

10 February 2004

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3G represents a strategic priority for SFR

An ambitious 20-year project

SFR, whose application for a UMTS licence in July 2001 was deemed the best by the French regulator, the ART, considers 3G to be a **major strategic priority**.¹

SFR will be launching its first 3G services during 2004, thus living up to its aim of becoming **the operator of choice for mobile multimedia and the latest telephony services**.

SFR's commitment is reflected in particular by the **high level of capital expenditure** it has already made in order to construct a network which offers the highest level of quality on the market.

Since 2001, SFR has been carrying out a **major programme of work in order to build its UMTS network** (250 million euros had already been spent by the end of 2003, excluding the cost of the licence), although the service is not yet generating any revenues. At the same time SFR has continued to invest heavily in extending and improving its GSM network (by the end of 2003 its total capital expenditure on its GSM/GPRS network, which now covers 98% of the French population, with 87% geographical coverage of the country, had reached 4.5 billion euros).

Expenditure on its GSM/GPRS and UMTS networks and IT systems, borne by SFR's shareholders (Vivendi Universal and Vodafone), is likely to increase by more than 10% during 2004 to over 880 million euros.

Expertise provided by the world's leading mobile operator

SFR's launch into 3G has been made **under the aegis of Vodafone**² (the world's leading mobile operator) which has been focusing on UMTS as a major part of its overall strategy worldwide.

SFR has been working **in collaboration with the Vodafone Group's European operators** and has benefited greatly from the expertise and experience acquired by the group as a whole. SFR has been heavily involved in the technical development work carried out in conjunction with the manufacturers of both network infrastructures and the phones themselves. This collaboration has enabled SFR to steal a march in **ensuring its supply of dual-band phones (which can use both 3G and 2.5G networks)**, which is vital for the successful introduction of 3G in France. The roaming agreements in place within the Vodafone Group will ensure that SFR's customers also benefit from the major advantage of guaranteed **continuity of their 3G services in 12 European countries (by the end of 2004)**, i.e. from the widest 3G coverage on the market.

Extra capacity to meet the expansion in demand and the growth of new services

SFR, which had 14.7 million customers at the end of 2003, considers that the move to 3G is a logical and inevitable technological step forward. This technology offers the **extra capacity** needed in order to cope with **the foreseeable growth in demand from its customers**. The additional radio resources will both resolve the problem of the risk of saturation of the voice

¹ SFR has been awarded a UMTS (3rd generation) licence for a period of 20 years (2001-2021). The cost of the licence was an up-front payment of 619 million euros, plus an annual fee amounting to 1% of the turnover of the 3G services.

² Vodafone™, Vodafone Mobile Connect and Vodafone live! are registered trade marks of the Vodafone group. BlackBerry and all names in the BlackBerry family are registered trade marks and are the exclusive property of Research In Motion.



network in the major towns and cities and make it possible to offer **new services** as part of the rapidly-growing multimedia sector.

3G is based on an advanced technology (UMTS) which offers **higher capacity and greater bandwidth** over the same frequency spectrum. **Its main benefit, from the user's point of view, is speed** - much faster access to services as far as the general public is concerned, enhanced performance for businesses and more user-friendly services for everyone, all achieved by faster transmission of data and shorter response times. **UMTS is between five and ten times faster than GPRS, which itself is three times faster than GSM.**

This technology offers high signal-handling capacity which makes it possible to **transport several minutes of TV-quality streamed video** over the mobile network.

These new video services will **further boost the growth in new uses** of mobile phones which is already starting to make itself felt.

3G - another step forward

SFR considers **3G as the next step in the series of new services launched during 2003**, which included both **multimedia services for personal customers** and **services for business customers**. With 3G, SFR hopes to be able to offer its customers faster access to enriched services based on the increasing use of mobile broadband and video imaging.

These new uses of mobile phones are already a reality as can be seen from the following statistics, which demonstrate the recent growth in this sector:

- 410,000 **Vodafone live!** customers by the end of January 2004,
- 76% of these customers regularly use multimedia services
- Overall, SFR now has **twice as many customers** using multimedia services as in 2002 (2.3 million at the end of December 2003)
- **4 times as many** multimedia sessions (compared with 2002)
- In December 2003 alone, 1.5 million ringtones and logos and 250,000 games were downloaded by SFR's customers (three times as many as in January 2003)
- **100,000 multimedia messages** are being sent every day
- SFR became the **leading provider of text messaging services** during the fourth quarter of 2003 in terms of both overall traffic and usage by customers. In total, over the whole of 2003, SFR's customers sent more than 3.3 billion text messages, an increase of 50% over 2002.

Speed and ease of use

3G will bring a new dimension to all these existing services and should be viewed in terms of evolution rather than revolution. SFR's highly pragmatic approach is to build on the use currently being made of its services and **to focus on developing these services to meet the real needs of its customers, particularly as far as personal communications are concerned.**

3G is particularly suited to meeting the needs of **Vodafone live! customers**, who are able to benefit from the arrival on the market of new generation phones with large colour screens, integral cameras, hypersound, easy-to-use menus and Internet access. These customers are aged between 15 and 35, interested in all the new ways of using mobile phones and want a



whole range of innovative multimedia services, including pictures, games and music, as well as a customisable phone and Internet access.

3G will **make it much quicker and easier** to search for content or to use **multimedia services**. It will be **quicker** to send multimedia messages with **much higher photo resolution**. It will take between five and ten times less time to download images than with GPRS. In short, it will be easier to access multimedia services, which will have more user-friendly features and which in general will be much easier and more exciting to use.

3G is also ideal for **business customers** who, above all, need **tools to improve productivity and performance**. While away from the office, they need to be able to have remote access to all their IT applications, including in particular their business email. Non-office based employees are already able to use “**mobile office**” solutions available from SFR, such as **BlackBerry**, PC cards (**Vodafone Mobile Connect Card**) and PDAs.

3G will provide these customers with the necessary **speed and bandwidth** required for the bandwidth-hungry applications used in business. It will enable them to use a laptop computer and mobile connection to access their **email** and open **attachments**, without needing a wired connection to their IT network. It will also enable them to **access their company's intranet quickly and securely**. The far higher bandwidth capacity available, compared with GSM technology, means that it is likely that **mobile phones will become much more widely used in business**, and may also become – why not? - the main office phone, with a range of pricing options to suit various types of usage.

Emergence of new services, with video as the main attraction

As well as all the traditional services, whose performance is undeniably improved by 3G, we are going to see a range of **new services** which will create a **completely new way of doing things**, particularly in the case of **personal communications**.

Videophones, which let you see the person you are talking to on the telephone's screen, are the hot new feature to come with 3G. It will be possible for company staff to use their mobiles in order to take part in **videoconferences**, rather than having to use a fixed line as has been the case up to now. As far as the general public is concerned, until more people own 3G phones, customers will be able to establish a videophone link between their 3G mobile and a PC fitted with a webcam and connected to the Internet. As increasing numbers of people buy dual-band (3G/2.5G) phones, this service will become more widely used.

Video content is another new feature made possible by 3G. This means that customers can view highlights of TV programmes on their mobile phone, download video clips or, if they are film fans, watch film trailers. Video content will also enhance personal communications, as the image of the day can be sent to other people in the form of multimedia messages.

There are many examples of applications which use video and which need more bandwidth than is currently available. **Video surveillance using a 3G mobile** is one such. This will be possible with a webcam installed in a location to be monitored (such as a second home) which will send real-time pictures to the screen of the mobile phone and can set off an alarm if movement is detected. This service could also be of benefit in the business sector (for all sorts of monitoring applications ranging from cold rooms to battery chickens!).

The creation of images on mobile phones, plus the automatic dispatch of text messages, also offers new opportunities for the fast-growing **Machine-to-Machine** sector, for which the **potential market in France has been estimated by SFR at 7 million lines**. SFR is currently testing an application for automatic shelf restocking in petrol stations with a leading food brand.



SFR's five key criteria for the success of 3G

As SFR's number one priority is customer satisfaction, it believes that there are five **preconditions** which are essential for ensuring that the **launch of 3G in France is a success**.

- The first is to ensure **continuity of service** between the UMTS and GSM/GPRS networks. SFR will, right from the start, guarantee the continuity of its 3G communications services within France by making use of dual-band phones (3G/2.5G) and handover between the UMTS and GSM/GPRS networks. SFR believes that such continuity of coverage, which requires a high level of fine-tuning of the networks, is vital in order to ensure that it can provide a high-quality service to its customers.

Early experiences with commercial 3G networks in other countries have, in fact, been marred by lack of continuity of service. NTT Docomo was held back in the first months after its commercial launch by restricted 3G coverage in Tokyo, and it was not possible for its 3G phones to use its existing 2.5G network. Hutchinson 3 was penalised in the same way by its lack of dual-band phones when it launched commercially in the United Kingdom and in Italy.

Bearing this in mind, SFR has planned to establish **reciprocal arrangements** between areas with 3G coverage and those covered by WiFi, with a view to providing its customers with a seamless service over its GSM/GPRS, UMTS and WiFi networks. Access to the service will be carried out in a manner which is totally transparent to the customer, as the laptop itself will select the network which offers the best bandwidth capacity and quality.

- The second key to success is to have a **wide range of dual-band (3G/2.5G) phones**. SFR's ability to collaborate with the Vodafone Group is a huge plus in this respect.

- **The quality and reliability of the services** is the third prerequisite for the success of 3G in France. This is why, unlike certain operators in other countries, SFR has preferred to focus on quality of service rather than launch 3G too soon. SFR has, together with the hardware manufacturers, had to meet the challenge of all the complex technological and industrial changes required in order to make the network and the phones themselves suitable for services other than voice. The lack of specific standards and protocols shared by all players has made integration more difficult. By focusing on a proper dialogue between manufacturer and operator at all stages, in close collaboration with Vodafone, SFR has been able to make considerable progress in the 3G sector since the first tests carried out in 2003.

- A fourth key factor is that customers can access **truly innovative services** (videophone, video streaming, etc.). SFR's existing or future partnerships with content providers will mean that it will be able to update its innovative services on a regular basis.

- The fifth precondition for success **is to make the public aware of the benefits**. When it launched the **Vodafone live!** multimedia services in November 2003, SFR ran a **major consumer education campaign in its sales outlets**, offering information and advice to its customers in order to make sure that they knew how to take full advantage of the new features available, and this kind of help will also be provided for the new 3G services. The main objective is for customers visiting **SFR's 550-strong network of sales outlets** to be given relevant and straightforward advice and information which will enable them to pick up their new phone and try it out on the spot.

Enhanced means of communication

In addition to its uses in the business sector and in private life, 3G is a **fantastic way** of strengthening social ties and improving personal communications. Taking into account the rate of penetration of mobile telephony in France (70% of the population), 3G offers a new way of narrowing the digital divide by encouraging the development of **new services which bolster job creation** and thus strengthen the local economic fabric. In this way, the economy of France as a whole could benefit from 3G.



The growth of video and imaging services will give rise to a **second generation of developers** who will use mobile telephony as the new means of mass distribution of their content. The music industry is very hopeful, since mobiles can be found in the pockets of all teenagers nowadays. The capacity of 3G to broadcast music securely and with high-quality sound means that we are likely to see a growth in the number of pop videos being played on mobile phones. 3G is also likely to be a **source of growth** for games developers. In 2004, SFR's total payments to developers are likely to exceed 150 million euros (for voice services, text messaging and mobile Internet, using both 2G and 3G technology).

3G will therefore allow SFR to fully develop its role as both a distributor of content and as the instrument for improving personal communications within the various communities which use these services (both in business and among family and friends).

3G will provide SFR with the necessary bandwidth capacity and frequency resources required to meet the expected growth in the volume of communications, and will also allow customers to make increasing use of new video-based services.

It is now up to consumers to take advantage of the new opportunities offered by these advances in technology.

At the same time, SFR will focus on its particular aim in this ever-changing world: to **make life easier for its customers**.



The first 3G barometer survey conducted by TNS SOFRES and SFR

TNS SOFRES/SFR's 3G barometer survey

METHODOLOGY:

This survey was conducted by TNS Sofres, on behalf of SFR, amongst a sample of 1,138 people representing the French population aged 15 and over and owning a mobile phone (a multi-operator sample).

The interviews were conducted on a face-to-face basis in people's homes between 29 January and 2 February 2004.

RESULTS:

As far as technology in general, such as computing, the Internet, mobile telephony, video, photography, etc., is concerned, which of the following statements best describes your views?

- I am very interested in technology and keep up to date with all new developments 10%
- I am interested in technology, but don't keep up with everything 57%
- I am not really interested in technology 25%
- I don't like technology at all, in fact I'm a bit of a technophobe 7%
- don't know 1%

I am going to mention a few terms which are mobile-phone related. In each case, can you tell me if you have never heard of the term, you are aware of the name, you know roughly what it means or if you can actually explain what it means.

	Can explain the term	Knows roughly what it means	Is aware of the name	Subtotal for "knows the term"	Has never heard of the term or doesn't know anything about it
GSM	7%	19%	43%	69%	31%
GPRS	9%	10%	25%	44%	56%
UMTS	4%	2%	10%	16%	84%

From what you have seen, read or heard about "the mobile phones of the future", would you say that the changes to come will....

- revolutionise the use of mobile phones..... 20%
 - bring about significant, but not radical, changes..... 37%
 - bring about fairly significant changes..... 25%
 - not really bring about any changes 11%
 - don't know 7%
- } 57%

Do you think that 3rd generation mobile telephony will in particular....

- help people get organised and make it easier to obtain information..... 37%
- be used for entertainment or for passing the time 24%
- encourage people to make more phone calls 20%
- several of the above..... 7%
- don't know..... 12%



I am now going to ask you to rank the following statements in order, according to which you think best applies to 3rd generation mobile telephony. Do you think that a 3rd generation mobile phone is most like...

- a palm PC54%
- a portable television8%
- a mobile webcam8%
- a PDA such as a Palm Pilot8%
- a means of obtaining broadband access7%
- an interactive games console3%

In the near future, it is going to be possible to use mobile phones to access a whole new range of services and features, such as exchanging pictures and video clips, shopping, entertainment, or obtaining information. Which of the following is most applicable to you?...

- I am very excited about these new services and will be one of the first to use them.....5%
- I am somewhat excited about these new services, but am going to wait till they are more established.....25%
- I have managed perfectly well up to now, so can wait for a bit longer.....48%
- I have no intention of making use of these new services in the short term, if ever19%
- don't know3%

In time, with the new advances in telecommunications technology such as UMTS, you will be able to use mobile phones to access a whole new range of multimedia features - this is what we call 3rd generation mobile telephony. I am going to list a few new features or services which could be available from a mobile phone.

What is your view of each enhancement? Would you say that:

You are very excited about the new feature/service and will be one of the first to use it

You are somewhat excited about the new feature/service, but will wait till it is more established

You are getting along just fine at the moment and so can wait for a bit longer

You have no intention of making use of the new feature/service in the short term, if ever

	Very/somewhat excited
• Making and receiving phone calls with better sound quality than at the moment	63%
• Being able to see the person on the other end of the line while you are talking to them (videophone)	54%
• Monitoring your house or other private premises through your mobile phone, using a webcam connected 24/7 and being able to receive an alarm call in the case of any problems	42%
• Being able to save and/or send photos or pictures of higher quality than at present (high resolution)	40%
• Accessing all your emails and attachments from your mobile phone	40%
• Having instant access to all your emails and attachments and broadband access to the Internet on your <u>laptop</u> , using your mobile phone for your connection rather than having to use an outside fixed line.	40%
• Exchanging messages containing short video clips with other telephones or over the Internet	38%
• Browsing the web from your mobile phone twice as fast as you can at the moment	34%
• Downloading applications, games, music and ringtones at broadband speeds	28%
• Receiving regular video updates on subjects of particular interest to you, such as the news or major sporting events	25%
• Watching television on your mobile phone	21%



So, now that you know a little more about the new developments and services which will be available through the “mobile telephony of the future”,

Would you say that the changes to come will....

- | | | |
|--|-----|-------|
| ▪ revolutionise the use of mobile phones..... | 32% | } 73% |
| ▪ bring about significant, but not radical, changes..... | 41% | |
| ▪ bring about fairly significant changes..... | 17% | |
| ▪ not really bring about any changes..... | 5% | |
| ▪ don't know..... | 5% | |

Conclusions drawn from the first 3G barometer survey conducted by TNS SOFRES and SFR

Those who already own a mobile phone are interested in technological innovations, without actually being complete techno addicts → they view technology as being a tool to be used for their benefit rather than “technology for technology’s sake”

- I am very interested in technology and keep up to date with all new developments 10%
- **I am interested in technology, but don't keep up with everything** **57%**
- I am not really interested in technology..... 25%
- I don't like technology at all, in fact I'm a bit of a technophobe 7%

People are not familiar with the term UMTS at the moment, but that isn't the point

Not many people are familiar with the term UMTS (16%), but the main point is not in fact how familiar people are with the technology - above all, people with mobile phones are interested in the benefits the technology will bring.

This is proven by the fact that, *while 100% of mobile phone owners were using GSM technology, not many were familiar with the term itself (68% had heard of it and only 26% knew exactly what it meant).*

The most important thing as far as mobile phone users are concerned is the potential for enhanced services which can be expected from the mobile telephony of the future

The main benefits mobile phone users expect to obtain from the mobile telephony of the future are improved communications and enriched services and they are inclined to view third generation mobile phones rather like a palm PC.

Most people are interested in the practical uses of the phone, except for people at the younger end of the sample (under 20 years old) who, not surprisingly, are rather more interested in being able to play games on their phone.

Mobile telephony of the future (3rd generation telephony)....



will ...	
• help people get organised and make it easier to obtain information	37%
• be used for entertainment or for passing the time	24%
• encourage people to make more phone calls	20%

and is felt to be like...	
• a palm PC	54%
• a PDA	8%
• a mobile webcam	8%



All in all, nearly one third of mobile phone owners say that they are looking forward to trying out new features and services...

- I am very excited about these new services and will be one of the first to use them5% } 30%
- I am somewhat excited about these new services, but am going to wait till they are more established25%
- I have managed perfectly well up to now, so can wait for a bit longer48%
- I have no intention of making use of these new services in the short term, if ever19%
- don't know3%

After describing actual features or services and tangible benefits which could be obtained, people become more interested and excited about the prospects.

Most people want to see improved personal communications, while also expressing a concern for security:

(% very or somewhat excited)

- Making and receiving phone calls with **better sound quality** than at the moment63%
- Being able to see the person on the other end of the line while you are talking to them (**videophone**)54%

But they also want more advanced services which offer practical benefits:

- **Monitoring your house** or other private premises through your mobile phone, using a webcam connected 24/7 and being able to receive an alarm call in the case of any problems.....42%
- Being able to **save and/or send photos** or pictures of **higher quality**40%
- Having instant access to all your emails and attachments and broadband access to the Internet on your laptop, using your mobile phone for your connection rather than having to use a fixed line.40%
- **Accessing all your emails and attachments** from your mobile phone.....40%

And finally, games and entertainment:

- Exchanging **messages containing short video clips** with other telephones or over the Internet.....38%
- **Downloading applications, games, music and ringtones** at **broadband** speeds.....28%
- **Receiving regular video updates** on subjects of particular interest to you, such as the news or major sporting events25%
- **Watching television** on your mobile phone21%



In conclusion, when they hear about the tangible benefits to be obtained rather than just being told about the concept or the technology involved, French mobile phone owners are enthusiastic, even excited.

It was noted that the perception of the level of change which will be wrought by the telephony of the future became stronger after a simple explanation was given of the new applications which will be made possible by 3G.

the changes to come will....	<u>Before</u>	<u>After</u>	
- revolutionise the use of mobile phones	20%	32%	+12
- bring about significant, but not radical, changes	37%	41%	+4
- bring about fairly significant changes	25%	17%	-8
- not really bring about any changes	11%	5%	-6
- don't know	7%	5%	-2



3

SFR presents its first 3G services for business customers

The 3G/2.5G Vodafone Mobile Connect Card: SFR's first 3G service offering

The 3G/2.5G Vodafone Mobile Connect Card (VMCC) is a PC-based wireless solution which allows people to use their laptops to access their email, the Internet and office applications with complete security while away from the office, anywhere in France or elsewhere in Europe.

This 3G solution is aimed at corporate customers and those in the SME sector who need effective and reliable tools which improve their productivity. It can be used by **non-office based employees** (such as sales staff and maintenance engineers) of companies from the smallest enterprise up to major corporations, when travelling throughout France or abroad.

The installation and use of this new PC card has been made as simple as possible in order to allow it to be introduced quickly throughout the company and also to enable the end users to start using it immediately. The interface on the customer's computer, known as the "Dashboard", is an extremely user-friendly tool which provides one-click access to the company's office applications or to the Internet.

The VMCC: a high-quality solution in a promising market

The VMCC is a solution designed to meet a high level of demand from businesses whose staff are increasingly tending to work away from the office. Small businesses and companies which already own laptop computers are the main target for the 3G/2.5G VMCC. Three million laptops were in circulation at the end of 2003 (source TMS Comtec), which is a very promising market.

Companies and small businesses currently represent 20% of SFR's 14.7 million customers.

Why is the VMCC moving to 3G?

The 2.5G VMCC is currently marketed by Vodafone Group partners in 15 countries worldwide, and has already been taken up by 150,000 customers, including 10,000 in France, since it was launched in April 2003. In terms of usage, SFR estimates that 80% of users use it to access their email and 20% to access office applications.

The speed and bandwidth available with 3G considerably increases the range of applications which can be accessed from mobile phones, such as:

- transfers of attached files, images or video
- access to large databases,
- faster access to websites, whatever the size of the pages.

The VMCC, which is the first such solution to operate on both UMTS and GSM/GPRS networks, provides end users with guaranteed continuity of service throughout France:

- in areas with 3G coverage at speeds between 5 and 10 times faster than with 2.5G,
- at rates of up to 54 kbit/s everywhere else,
- as well as abroad (with roaming).



VMCC is therefore a scalable solution, which will eventually be able to offer users new applications such as one-click access to videoconferencing.

SFR believes that, by 2007, some 15% of laptops used for business purposes will be fitted with 3G PC data cards. The 3G/2.5G VMCC is therefore going to be increasingly widely used by business professionals and employees who regularly work away from their office.



Launch plans

SFR plans to launch the 3G/2.5G VMCC in three phases:

- Initial trials to begin in February 2004 with several hundred of SFR's business customers
- Launch of a pilot programme involving several thousand SFR customers (small businesses and corporate customers) in May 2004, in the three main cities of Paris, Lyon and Lille.
- Commercial launch of the 3G/2.5G VMCC in June 2004 targeting small businesses and corporate customers, initially in five cities - Paris, Lyon, Lille, Nantes and Toulouse - and then in other main towns and cities in France by the end of 2004.

The roaming agreements signed between SFR and several of Vodafone's partner networks will ensure that SFR's customers benefit from the widest 3G roaming coverage on the market while travelling abroad, and that they will therefore also be able to benefit from **continuity of coverage of their 3G services in 12 other countries by the end of 2004**: United Kingdom, Germany, Italy, Spain, Netherlands, Greece, Portugal, Belgium, Switzerland, Ireland, Sweden and Japan.



4

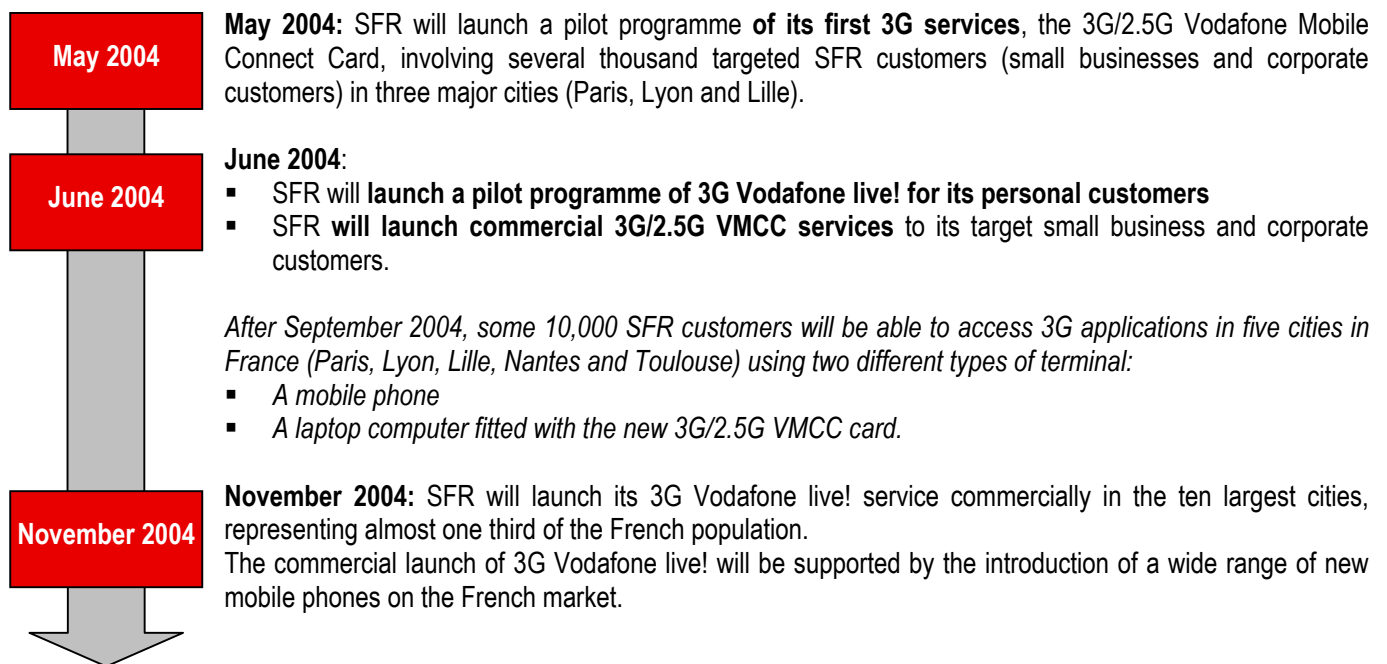
The commercial launch of 3G services in 2004 - a strategy based on the principles of quality of service

As the first stage in its strategy for launching its 3G services, SFR will begin by preparing the market for the introduction of these services.

In **February 2004**, SFR will begin its first **3G trials** in three cities (Paris, Lyon and Lille), supplying several hundred small business and corporate customers with the 3G/2.5G VMCC and at the same time supplying personal customers with dual-band mobile phones.

The programme will gradually be extended between February and November 2004, when the commercial launch of SFR's 3G services to the general public will take place.

SFR's **timetable for each stage** of the commercial launch of 3G services throughout 2004 is as follows:





SFR's UMTS network in February 2004

SFR's UMTS network is now operational in three cities: Paris, Lyon and Lille.

SFR's strategy for the rollout of its UMTS network:

The decision to choose these three cities as the first to receive UMTS services was based on SFR's analysis of the following criteria:

- the population density of each city,
- the geographical areas with the highest level of voice traffic,
- the usage patterns of SFR's customers:
 - the geographical areas in which data traffic is highest are also those in which the main priority for SFR's customers is quality of service,
 - the geographical areas in which the number of users of business data services (VMCC, BlackBerry, etc.) is the greatest.

All these factors led SFR to decide to roll out its UMTS network primarily in the main urban conurbations and cities.

The key stages of the rollout of 3G in France

SFR's initial intention is to provide coverage for densely populated areas, and later to expand the network to cover the main arterial routes through the country.

Dates	3G coverage
February 2004	3 cities: <ul style="list-style-type: none">▪ Paris, Lyon and Lille
June 2004	5 cities: <ul style="list-style-type: none">▪ Paris, Lyon, Lille, Nantes and Toulouse
End of 2004	10 major towns and cities i.e. almost one third of the population of France
End of 2006	More than half of the population of France

Continuity of service throughout France right from the moment of commercial launch of the UMTS network

A technological challenge

3G/2G handover is a technical solution which allows the mobile to switch, in a manner transparent to the customer, from a UMTS cell to a GSM/GPRS cell, guaranteeing continuity of the customer's voice or data communications.



When it launches its 3G service commercially, SFR will be providing a handover function between its UMTS and its GSM/GPRS network, thus guaranteeing total continuity of service between the two networks.

Dual-band phones will be able to switch from one network to the other, using a technique called **reselection**. This means that a user can pass from a UMTS cell to a GSM/GPRS cell when the UMTS coverage fails and go back to the UMTS cell automatically as soon as the mobile finds it again.

The 3G/2G handover is an extremely complex technical process and is a real challenge for the operator. It involves providing customers with terminals which are able to switch between two networks (UMTS and GSM/GPRS) using different technologies, different frequencies, different bandwidths and different manufacturers, in order to guarantee that the customers receive the best possible service according to the level of quality of service attainable on each network.

An essential factor in order to obtain quality of service comparable to GSM

SFR considers that 3G/2G continuity of service is an essential factor in order to be able to provide customers with the same level of quality and coverage of service as they currently enjoy with the GSM/GPRS network.

The combination of the use of dual-band phones and the 3G/2G handover solution will allow all customers to retain their current phone numbers and still enjoy nationwide coverage for all the services they have subscribed to, and will also guarantee continuity of their communications, whatever the network used.

SFR is therefore committed to guaranteeing this continuity of service right from the start of its commercial UMTS services.

Coexistence of the GSM/GPRS and UMTS networks will lead to natural migration from one to the other

The GSM/GPRS network will continue to operate until all users have dual-band 3G/2.5G phones.

This is why SFR is still committed to continuing its ambitious programme of capital expenditure on its GSM/GPRS network during 2004.

SFR will continue to roll out new sites in order to improve both existing coverage and the quality of the network, and will extend the network to cover rural areas currently without coverage. **More than 2,000 new GSM/GPRS sites will be established during 2004 and 2005.**

By the end of 2003, a total of **4.5 billion euros** had already been invested in the GSM/GPRS network.

Furthermore, the programme to achieve coverage in dead spots should enable the geographical coverage of SFR's GSM network to increase from 87% (in 2004) to 92% by 2006, i.e. coverage of more than 99% of the population.

In order to ensure greater efficiency and better integration of its UMTS sites, SFR has, since 2001, been using existing infrastructures for the rollout of its UMTS network in 70 to 80% of cases.

Between 2001 and 2003 SFR spent 250 million euros on the rollout of its UMTS network. In total, **more than 3 billion euros will be invested in the UMTS network over a 10-year period.**



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Examples of 3G services

The launch of 3G services will give rise to both:

- IMPROVEMENTS: improved performance for existing services because of faster access speeds and enriched content; and
- INNOVATION: the emergence of new services based on the introduction of TV-quality video imaging

The improvements obtainable with 3G

The 3G/2.5G Vodafone Mobile Connect Card: SFR's first 3G service offering for business and corporate customers

The 3G/2.5G VMCC is a PC data card (just the size of a business card) which, once installed in a laptop computer, provides an instantaneous connection to the UMTS network simply by clicking on the user interface (the "Dashboard").

Users are able to gain totally secure access, in under a minute, to the company intranet and their business email, to open emails and download attachments and to browse the web.

The Vodafone live! experience has got faster and better

With just one click on their Vodafone live! mobile, users are now able to access a whole range of information and entertainment services more quickly than before and with improved ease of use, especially in terms of the time the phone takes to display photos and ease of navigation from page to page.

With 3G, users can also access enriched Vodafone live! services such as TV-quality video clips lasting an average of 2 minutes: information services, sports news, clips, film trailers, etc.

CD-quality music: listen to your favourite artists or new tracks on your mobile but at CD quality

With just a few clicks you can turn your mobile into a personal stereo! By connecting to Vodafone live!'s "music" services users can listen to selected streamed audio clips, their favourite artists or the top 10. With 3G, the quality of the sound reproduction is as good as a CD!

Innovations obtainable with 3G

Videophones: be able to see the person you are talking to

With just a few clicks, users can activate the "videophone" mode of their telephone. The person at the other end of the line can choose whether or not to activate this function on their own phone. This means that, however far apart they are, the people at each end can talk to one another and see each other at the same time by setting the appropriate camera parameters.

This function can also be used for connections between a PC fitted with a webcam and a mobile.



By being able to see a moving image while using a mobile, the videophone feature will be an entirely new way of approaching interpersonal communications. In future, it will be hard to imagine that we once talked on the phone without being able to see one another!

Personal multimedia video messaging: exchange video clips

Sending multimedia video messages is as easy as texting!

To make things easier, the mobiles are fitted with cameras, so that you can film a sequence then send a video clip with sound (voice, music, noises, etc.). It only takes a few clicks to film the sequence and record it. It can be sent by multimedia message to someone else who can view and listen to the film sequence at once using his or her mobile phone (3G or 2.5G) or a computer.

Video surveillance: the mobile phone becomes a monitor with an alarm function

Using the integral “webcam” feature in the mobile, the user can view the area to be monitored on the phone’s screen either at specific times or live. Eventually, it will also be possible to use the phone for remote control of the cameras installed in the areas being monitored (zoom, tracking, infra-red, etc.).

The user can activate the “alarm” function and program the factors which will trigger an alarm, such as movement, change of temperature, etc. He/she will then receive a real-time video clip of the problem which has been detected. If this happens, then he/she can activate the “webcam” function and use the mobile as a monitor screen.

Video content messages: automatic reception of video clips of selected items

Users can receive real-time video clips (with an alert) of breaking news items. Users can subscribe to this service on either a temporary or permanent basis, and will soon find this automatic “multimedia video messages” service very useful. For instance, the service can be used to receive:

- general information: the day’s news, etc.
- sporting events: World Cup, Olympics, etc.
- traffic information, etc.



Live TV: receive live broadcasts on your mobile

With 3G, users can watch live TV on their mobile phone while they are travelling. They can watch programmes of their choice, or be alerted automatically via their mobile when a programme is about to start (e.g. the start of a grand prix race, the news, etc.) and then, with just one click, can turn on the relevant TV channel to watch the event live.