



Eidgenössische
Kommunikations-
kommission

Commission
fédérale
de la communication

Commissione
federale
delle comunicazioni

Cumissiu
federala
da communicaziun

Federal
Communications
Commission

Activity Report 2001

of the

**Federal Communications Commission
(ComCom)**

Federal Communications Commission (ComCom)

Marktgasse 9

CH - 3003 Berne

Tel.: 0041 31 323 52 90

Fax: 0041 31 323 52 91

Website: <http://www.fedcomcom.ch>

List of Contents

I. RESULTS OF THE LIBERALISATION PROCESS AND PERSPECTIVES	3
1. FOUR YEARS OF LIBERALISATION IN TELECOMMUNICATIONS: RAPID INITIAL SUCCESSES AND REMAINING DEFICIENCIES	3
<i>The "best-case scenario" in relation to the period around the inception of the Law on Telecommunications</i>	<i>4</i>
<i>Euphoria followed by great disillusionment</i>	<i>5</i>
<i>Pressure for consolidation and withdrawal of investors from Switzerland</i>	<i>6</i>
<i>Essential competition in infrastructure</i>	<i>7</i>
2. TRENDS AND EFFECTS OF THE FEDERAL COURT'S ADMINISTRATION OF JUSTICE	8
3. OUTLOOK	10
<i>The broadband market and the importance of unbundling</i>	<i>11</i>
<i>The mobile market and the regulations for implementation of the decree on protection from non-ionising radiation</i>	<i>12</i>
II. THE COMMISSION AND ITS SECRETARIAT.....	14
1. THE COMMISSION.....	14
2. THE SECRETARIAT	14
III. ACTIVITIES OF THE COMMISSION.....	15
1. INTERCONNECTION	15
1.1. <i>Leased lines and transmission media: Commcare vs. Swisscom</i>	<i>15</i>
1.2. <i>Mobile termination: diAx vs. Swisscom</i>	<i>16</i>
1.3. <i>Procedures according to the "Long Run Incremental Cost" (LRIC) calculation model: MCIWorldcom vs. Swisscom and diAx vs. Swisscom respectively</i>	<i>17</i>
1.4. <i>Unbundled access to the local loop: diAx vs. Swisscom</i>	<i>17</i>
2. LICENCES.....	18
2.1. <i>WLL licences.....</i>	<i>19</i>
2.2. <i>UMTS licences.....</i>	<i>19</i>
2.3. <i>GSM licences.....</i>	<i>21</i>
2.4. <i>Universal service</i>	<i>21</i>
3. NUMBERING PLAN	23
4. NATIONAL FREQUENCY ALLOCATION PLAN	24
5. CARRIER (PRE-)SELECTION.....	24
6. MEASURES IN SUPERVISORY PROCEDURES	25
7. STUDY TRIPS BY THE COMMISSION	25
IV. MARKET DEVELOPMENT: KEY STATISTICAL VALUES	27
V. SUMMARY OF THE COMMISSION'S ACTIVITIES	31
APPENDIX I: COMMISSION MEMBERS.....	33
APPENDIX II: COLLABORATORS OF THE SECRETARIAT	33

I. Results of the Liberalisation Process and Perspectives

Consumer demand for communication services has grown greatly over the last few years. Telecommunications, thanks to the universal service, guarantees not only a basic service offering for all sectors of the population but it also makes a contribution to social development by reacting with large investments in new technologies to meet the potential needs of a changing, mobile and dynamic world of work and consumption. It is also of key significance for the further evolution of the information society and is an important motor for the Swiss national economy.

After four years of liberalisation it is precisely from the viewpoint of consumers that notable successes can be discerned, but – apart from unfavourable developments on the capital market and those related to the economic downturn – there are also weak points in the legislation which the Commission believes should be remedied as quickly as possible. In particular, leased lines and unbundling of the local loop should be subjected to the interconnection obligation. The urgent opening-up of the market and the promotion of competition in these subsidiary markets has been encouraged by the Commission but prevented by a much-discussed decision of the Federal Court. In the Commission's opinion, these shortcomings should be overcome by an amendment to the decrees by the Federal Council.

In the remarks below, the Commission attempts to sketch out the high and low points of the process of liberalisation.

1. Four Years of Liberalisation in Telecommunications: Rapid Initial Successes and Remaining Deficiencies

Where effective competition among providers has been able to establish itself, the Law on Telecommunications (LTC) has enjoyed the success desired by the legislature: in contrast with other consumer sectors, consumers are benefiting from lower prices and a broader range of high-quality services; in the case of international and national fixed network connections in particular, distinct or even very large price reductions occurred between 1998 and 2000. In addition, the broad liberalisation of the telecoms markets in the European arena had a positive effect on Swiss tariffs.

The rapid integration of a technology into everyday life and its acceptance by so many people as is the case with mobile telephony is unprecedented. In this sector, recent years have seen the development of a particularly extensive range of services and pricing models matched to different groups of users. This also demonstrates the merits of infrastructure competition, since the self-determination of operators with regard to the configuration of their mobile network allows independent launches of particular offerings aimed at different target groups. Unfortunately, an attractive and varied range of offerings with different services and tariff structures does not necessarily make things any clearer for consumers. In order to increase transparency, several

internet-based platforms and consumer protection media offer consumers valuable facilities for making comparisons.

From the consumer viewpoint it should also be emphasised that today, universal service for the population and therefore the participation of everyone in social communication via a basic offering of telecommunications services is comprehensively guaranteed throughout Switzerland – and this will not change in the future.

Despite the positive results for consumers, there is an acute danger that the liberalisation process, which promised so much at the beginning, will become bogged down. The main reason for this is the continuing *de facto* monopoly of Swisscom over the access network.¹ Because of the current legal basis, unbundling of the local loop is not possible, i.e. competitors have no possibility of leasing subscriber lines and using a technology they have defined themselves in order to offer broadband services adapted to customers' needs. The regulation of leased line prices which the Commission tried to implement was also rendered impossible by the decision of the Federal Court on 3 October 2001 in the Commcare case. The lack of competitive pressure in these areas has far-ranging negative economic consequences and leads to restricted freedom of choice for end users. The regulator has no way of influencing the trend towards excessive prices.

This is making Switzerland a special case regarding the telecoms sector: the European Union is actively trying to improve the general conditions for new players in the market and is striving to increase competition in the long term. The EU vehemently favours, and is taking measures to achieve, consistent implementation of unbundling² as well as a reduction in excessive leased line prices. In late 2001/early 2002, for example, regulators in several EU countries with continuing relatively high leased line prices (e.g. France and Spain) lowered these charges. Switzerland, however, is running the risk of missing the boat. In this context both unbundling of the subscriber lines, which were financed by the community as a whole, and regulation of leased line prices to strengthen Switzerland's attraction as a service-based economy would be of major significance.

The "best-case scenario" in relation to the period around the inception of the Law on Telecommunications

Let us briefly cast our eyes back: in the preparatory phase of the Law on Telecommunications, which was adopted in the spring of 1997, commercialisation of the World Wide Web was

¹ On 7 February 2000, the Competition Commission (Wettbewerbskommission – WEKO) determined that Swisscom occupied a market-dominant position in the access network. The access network consists of the "last mile" i.e. the subscriber line between the user and the local exchange, plus the "middle mile", i.e. the lines between the local exchanges and the small number of interconnection switching centres, where connections exist with the core networks of other providers.

² In March 2002 the EU Commission initiated procedures for violation of agreements against five EU countries which are not complying fully with the unbundling regulations.

gradually taking hold. The magic word "internet" was associated with exciting – and more and more overexcited – promises for the future of the information and communications technologies; the talk was of borderless information exchange in the virtual global village and of the first e-commerce applications. Rapid growth was forecast for the internet and the "new economy".

In the preparations for and consultations on the new Law on Telecommunications, the development of the information society was – quite rightly – constantly cited as a major reason for liberalisation of the telecommunications markets.³ It is possible that the bright future promised by the technical specialists in the world of IT and telecommunications gave the Federal Council and Parliament the impression that opening up the telecommunications markets would develop such a (self-propelled) dynamic that intense competitive pressure would inevitably result, thereby eliminating the need for any major regulatory intervention, in particular "ex ante" regulation. In order to be able to react flexibly to the speed of technological development, an open framework of legislation was formulated which required interpretation in specific cases by the authority responsible for the relevant sector. It was furthermore optimistically assumed that a multitude of foreign telecommunications companies would stream into Switzerland, so an aim of the legislator was, that this would not cause Swisscom any serious distress. On the basis of the expected dynamism of the market and extremely good prospects for the future it was additionally assumed that there would be no problems in financing the high level of investment via the capital market.

The question of preserving jobs had aroused special concern during the parliamentary consultations, since in view of the restructuring and increased efficiency which had in any case become essential for Telecom PTT, many people feared a fall in employment in the telecoms industry. What happened was the exact opposite: in the dynamic initial phase of liberalisation Swisscom did indeed have to shed jobs, but the competition had a great need for skilled personnel. Thus since 1998 in the telecoms industry and related sectors (e.g. equipment producers and content providers) markedly more jobs were created than were lost, on balance. The positive effects expected in the longer term as a result of the impulse for growth resulting from opening up the market and creating new markets – especially in mobile telephony and the internet – became a reality more quickly than had been forecast.

Euphoria followed by great disillusionment

In fact the first two-and-a-half years of liberalisation exceeded the ambitious expectations. In parallel with the internet boom there was a euphoric mood of optimism. Investment in the Swiss telecoms market increased by leaps and bounds; in 1998 alone it doubled and continued to rise until the year 2000. In parallel with this, operators' turnover in 2000, at CHF 18 billion, already

³ In the message from the Federal Council on revision of the LTC dated 10 June 1996: "Without the LTC the population would not be able to make full use of the benefits of the information society. A great technological opportunity would be missed." (p. 13); cf. also p. 8ff.

exceeded the figures predicted for 2005 in the message on the Law on Telecommunications (LTC).⁴

In spring 2000, however, the mood changed within a very short time:⁵ as a result of the rapid and excessive indebtedness of many European telecommunications companies – caused by very expensive take-overs and the inflated prices paid at the UMTS auctions in England and Germany – a high degree of disillusionment and scepticism spread through the capital markets. A further aggravating factor was the fact that forecasts relating to the rapid success of the internet-based "new economy" turned out to be exaggerated and a delay in the availability of new mobile technologies (GPRS, UMTS) began to make itself felt. Because of the considerable need for investment in the telecoms markets, this mood swing had far-reaching consequences, since obtaining new credits was possible only at significantly higher interest rates than previously, if at all. Consequently, the share prices of most telecommunications companies, as well as those of the technology manufacturers, fell continuously. One major exception was the trend of shares in Swisscom, which rose slightly from mid-2001. At the end of 2001, many of the major European telecommunications companies continued to suffer from high levels of debt and a shortage of capital. Because of the high-priority need to reduce debt, investment accordingly has had to take a back seat. However, since the end of 2001 one can discern some stabilisation in share prices, although in some cases at very low values.

Despite a general "morning-after" feeling in the year 2001, turnover of the Swiss telecoms industry still increased by more than 6% (2000: +28.6%); Swisscom reported as well as growth in turnover, also an impressive profit. Investment in telecommunications in 2001, however, fell in comparison with previous years, but was still about one third higher than the value for 1997, the year before the market was opened up.

Pressure for consolidation and withdrawal of investors from Switzerland

In the first phase of liberalisation, the appearance of new players in the market saw considerable resources flow into Switzerland from abroad. The high levels of debt of certain telecommunications groups is also affecting Swiss subsidiaries, which can no longer provide much in the way of resources for investment. The continuing negative trend on the capital markets has also increased pressure for consolidation of the sector since the year 2000 (e.g. the merger of Sunrise and diAx).

This situation has become even more pronounced with the blocking of the liberalisation process by the Federal Court's significant decision on leased lines of 3 October 2001. In a key area for SME and alternative providers, Switzerland is additionally sending out consistent negative signals

⁴ Cf. message of the Federal Council on the revision of the LTC dated 10 June 1996 and the 2001 annual report of the industry association "Protelecom", February 2002, p. 3f, online: www.protelecom.ch.

⁵ Detailed presentation in the Commission's report for 2000.

as far as Switzerland as a location for business is concerned. Since this additional reinforcement of Swisscom's market position, major unrest can be discerned in the industry: many firms are worried about their investments and some are concerned about their very existence. In the interim, one of the few purely Swiss telecommunications providers (Commcare) has disappeared from the market and it was not the first to do so.

There is a real danger that investors and other competitors which, unlike Swisscom, are obliged to work on very modest margins will take their leave of Switzerland entirely. The following trends are apparent at the beginning of 2002: apart from complete cessation of business activity in Switzerland there are companies which have withdrawn their management from our country. There remains only a Country Manager without any real decision-making powers – and the importance of the branch office is considerably downgraded as a result. Other significant companies are waiting on hold and are hanging fire on larger investments in Switzerland, since the Swiss market has recently become unattractive because of a perceived legal uncertainty and the dominance of Swisscom.

On the basis of the general legal framework, the practice of the Federal Courts and the monopolistic sectors which cannot currently be regulated, a prosperous Swisscom is acting from a position of strength, leading to bitterness and a lack of understanding among small and generally financially weak competitors.

In the parts of the market which have been liberalised it is apparent that a former monopolist which is fast on its feet thanks to its strong starting position has no problems with surviving on the free market⁶ and may become a winner in the liberalisation process, after a phase of restructuring.

The Commission is of the opinion that competition, from which consumers have benefited practically in recent years, should not be further eroded. In the search for a fair solution which all sides can live with, a major role must also be played by the Confederation as part-owner of Swisscom – the guiding light must be the wellbeing of consumers and the national economy.

Essential competition in infrastructure

The balance-sheet in terms of infrastructure competition is two-edged: in the case of the GSM networks competition, also at the infrastructure level, has indeed had a positive effect on the range of services and providers' flexibility, as expected.

Over the last mile, on the other hand, similar expectations which were entertained in the year 2000 have unfortunately not been fulfilled. The subscriber lines financed by the community as a whole

⁶ For example, Swisscom's market share in GSM mobile radio has stabilised for more than a year at about two thirds. Cf. the chapter entitled "Market development: key statistical values " and OFCOM, Telecommunications Statistics, Compilation from diverse sources, situation on 30 June 2001, online: www.bakom.ch

could not be unbundled and the Swisscom monopoly remained. Contrary to the expectations of two years ago, no alternative access technology (cable TV network, WLL, powerline communications (PLC)) has become a serious competitor to the existing country-wide telephone network. The most advanced alternative would be the parts of the cable TV network with broadband capability; but these only cover parts of Switzerland and to date voice telephony has not been offered. In addition, high investment is essential in order to permit bi-directional communication over the cable TV network; this finance seems at present not to be very forthcoming. So in the near future, no robust, national competition can be expected in the access sector from the various technologies. If a form of duopoly emerges, only Swisscom and the cable operators would benefit; the other providers would still have no access to a broadband infrastructure.

Experience in other countries shows the positive effect of infrastructure competition: those countries which have the most broadband connections (South Korea, the USA and Canada) are distinguished by a high degree of infrastructure competition between telephone and cable TV networks over the last mile.

With regard to the infrastructure it should also be noted that certain cantons have tried, by means of financial demands which are not in conformity with the LTC, to make capital out of the laying of fibre networks over public property. The legislature has expressly excluded this because of the public interest in new infrastructures (Art. 35 LTC).

2. Trends and Effects of the Federal Court's Administration of Justice

Several decisions of the Federal Court in 2001 have caused the Commission genuine concern, both in terms of the reasons given and because of the consequences. In the decision on Swisscom vs. TDC of 13 March 2001 (BGE 127 II 132), concerned with precautionary measures relating to unbundling, the Federal Court already stressed the fact that an additional opening-up of the market was not necessary at this stage of the process. After all, the Court maintains, this type of access service was already offered by Swisscom; there was therefore no urgent need to liberalise this market with the aid of precautionary measures. The Commission for its part stressed that opening up the market quickly and enhancing the provision of such services was in the interests of the telecommunications market and would promote competition. In its reasoning, the Federal Court evidently placed the main emphasis on the direct interests of the community (see also BGE 127 II 8), whereas the viewpoint of the Commission focused on economic efficiency. However, it must not be overlooked that in the final analysis an improved market structure benefits the end user, in particular through price reductions, a wider range of services and increased efficiency (quality of services, innovation, etc.).

In a certain sense this differing outlook is also to be found in the manner in which the two institutions approach the question of any damages in the area of precautionary measures and

how they weigh the respective interests of the two parties. If the market-dominant provider is obliged to reduce interconnection tariffs and if this has an effect on prices for the end user, the possibility incontestably exists that this provider may lose market share. In the opinion of the Federal Court the decision in the matter itself must be awaited – above all when the applicant for interconnection is solvent – before such a measure can be taken, where appropriate; the private interest of the party opposing the complaint weighs heavier in this case than an improvement in competitive conditions. For the Commission, in certain circumstances, the opening-up of the market and the rate at which these markets change justify giving a greater weight to the interests of a company seeking an interconnection decision, because this is also in consumers' interests in the final analysis. It should additionally be recalled that the LTC is intended in particular "to enable effective competition in the provision of telecommunications services" (Art. 1 para. 2 c LTC); this aim is also taken up and mentioned in other legal provisions (Art. 11 para. 3, Art. 23 para. 4 LTC and Art. 6 para. 2 Decree on Telecommunications Services, DTS). This central element, moreover, is also to be found in the relevant provisions of the WTO (Art. VIII and IX of the GATS agreement as well as in the fourth GATS protocol on telecommunications).

Regulation and rapid further development of markets

The question of the rapid development of the markets and their regulation must not be underestimated. The legislature took this fact into account by explicitly giving the Commission competency for taking precautionary measures. For most other administrative authorities this competency derives from the jurisprudence. Moreover, the legislature imposed a deadline after which the authorities may be invoked if no agreement is reached between the parties (Art. 11 LTC and Art. 49 ff. DTS). The Commission wished to take these aspects into account in its decision in the matter of TDC vs. Swisscom dated 3 April 2001 as part of an interconnection procedure concerning the determination of mobile termination prices. Within the framework of an application for the implementation of precautionary measures, the Commission came to the conclusion that it was able to give a positive prognosis in legal terms for the applicability of the interconnection regulations. It provided detailed reasoning for this finding. On the basis of a complaint by Swisscom, the Federal Court, in its decision of 24 July 2001, insisted on the necessity of the first instance allowing itself sufficient time to judge complex juridical, technical or economic questions. In particular, this was said to be important – as already mentioned in the decision of March 2001 – when questions were involved for which no clear, explicit legal provisions exist or which have not yet been decided upon by the higher instance. The argument of the Federal Court is understandable: if the administrative authority has to judge a complex legal question in a summary procedure with regard to the aspect of probability, it must avoid, as far as possible, anticipating the decision in the main matter. On the other hand, it is not always a simple matter to distinguish in a procedure on the taking of precautionary measures between the appreciation of the material law and the juridical arguments which are not to be dealt with until the main decision.

The Federal Court's Commcare judgement on the matter of leased lines on 3 October 2001 was generally perceived as a blow to the liberalisation of the Swiss telecommunications market. On the basis of a complaint by Swisscom, the Federal Court, basing itself on a restrictive interpretation of the LTC and DTS, rescinded the main decision of the Commission, in which it pronounced in favour of subjecting leased lines to the interconnection obligation. In the decision on the Commcare appeal, which used the unbundling argument, the Federal Court represented the view that this measure was not permissible on the basis of current legal provisions. There is no point in going into detail here about the considerations; they have been discussed in particular by the Commission in its TDC vs. Swisscom decision of 5 February 2002.⁷ However, this decision does have serious consequences. It is quite obviously a serious obstacle to competition, at the level of both networks and services. Whilst the European Union has just adopted new pro-competition regulations in this sector, Switzerland is falling behind and may be able to catch up again only with some difficulty. The principle of eurocompatibility, among other things, serves to avoid such situations. In this area, regulatory innovation often has the purpose of promoting economic and technical progress. At the European level, it can be observed that the sectoral authorities and the competition authorities are making serious efforts to provide the various telecommunication services providers with access to the network. They are furthermore trying to strictly monitor the general conditions and modalities of such access. The effects of the Commcare decision, however, extend far beyond Swiss and European borders – an American association of telecommunications providers (the Competitive Telecommunications Association, CompTel) has complained to the foreign trade authority of the USA (the US Trade Representative) that Switzerland is clearly infringing the WTO obligations she has entered into.⁸ Because of all these considerations the Commission suggested in early 2002 to the Federal Council to amend the Decree on Telecommunications Services (DTS) so that unbundling and the interconnection obligation for leased lines are explicitly anchored in our national legislation.

3. Outlook

The initial euphoria in the telecoms industry has not been entirely dissipated, despite the setbacks and obstacles. Technological development continues to progress – albeit slightly more slowly, but inexorably. Consumer fascination and interest in the new information and communications technologies is also undiminished.

Since the conjunctural prognoses for the Swiss economy are agreed on a gradual recovery in the year 2002, a renewed upswing can also be expected in the telecoms industry. The communications sector's share in the value creation of the economy as a whole has already risen

⁷ Cf. section on "Publications – Decisions" on the ComCom website: www.fedcomcom.ch

⁸ See information at: www.ustr.gov/sectors/industry/Telecom1377/index.htm

to a noteworthy 3.5% in the last few years. According to a study by BAK Konjunkturforschung Basel⁹ the telecoms industry will become more important in the next few years.

In economic terms, the positive benefits of the new communications technologies, and mobile telephony in particular, extend far beyond the increasing number of calls: entirely new areas of business are being established in the field of services and content. In addition, increases in productivity in existing processes and brand new production models are expected. In brief: the use of these new technologies also leads to multiplier effects and substantial indirect advantages.

For consumers in such a dynamic environment it is important to have the security of the universal service which guarantees them a high-quality, low-cost basic offering of telecommunications services in all cases. The universal service, after the new award in the year 2002 and as laid down in the LTC, will be guaranteed throughout Switzerland.

Two areas with especially high future potential are currently causing the Commission great concern: the broadband market and the mobile telephony market.

The broadband market and the importance of unbundling

In order to increase the attractiveness of Switzerland as a business location, the Federal Council and Parliament are committed to being in the vanguard of the evolution of the information society internationally and appropriate programmes of support have been adopted. A further decisive prerequisite for this, however, would also be varied, low-cost broadband services over the "last mile". In the European Union, the introduction of unbundling in early 2001 laid the necessary foundations for the further development of the information society. A current study accordingly forecasts strong growth in demand in the European broadband market over the next few years.¹⁰

The lack of unbundling in Switzerland and the associated monopoly over the last mile has negative economic consequences in several respects: the competitive pressure which is essential to promote innovation and investment is lacking. Hence no varied, low-cost broadband service offerings are being provided; instead new and undesirable monopolistic relations are being created in the high-potential broadband markets (e.g. ADSL wholesale offerings). This leads to comparatively high wholesale prices and in particular to obstacles to competition at the level of services as well; this goes against the basic concept of the LTC.

In the interests of Switzerland as a service-based economy and in order to maintain a competitive, consumer-friendly telecoms landscape, it should be possible for all providers to take part in this promising market. Since the other access technologies have not turned out to be valid, practical alternatives, unbundling is a necessity. Unbundling would stimulate the process of liberalisation

⁹ BAK Konjunkturforschung Basel AG: "Der volkswirtschaftliche Nutzen von mobiler Kommunikation und Datentransfer in der Schweiz", February 2002, Study carried out for Economiesuisse, p. 18.

¹⁰ Frost & Sullivan (Germany), press release of 5 March 2002 (Report B082).

and allow alternative providers to determine the type and prices of their services themselves and maintain direct relationships with their customers. Otherwise there is a real danger that competition, which is not yet very sound, will be totally crippled.

In the Commission's opinion, however, there is an urgent need for action not only on unbundling, but also on leased line prices in our country, which seem to be clearly high in international terms. High costs are consequently being incurred primarily by Swiss SMEs, and the burden is also being felt by the alternative telecommunications providers forced to rely on such lines.

On the basis of the existing legal arrangements – according to the interpretation of the Federal Court – it is not possible for the Commission either to introduce unbundling or to regulate leased line prices. It is now up to the Federal Council to decide on this change, which is urgently necessary for the Swiss economy, and if possible to enact an amendment to the decrees which would subject unbundling and leased lines to the interconnection obligation.

Even on an unbundled broadband market Swisscom is still ideally placed at the outset, since it has by far the most customers and has already acquired great experience thanks to its ADSL service offering. Unbundling will not "take away" subscriber lines from Swisscom; it will merely be obliged to lease the lines to competitors at a reasonable price, in so far as consumers wish this. The frequently expressed insistence that unbundling would endanger the universal service is also completely false.

It must be borne in mind that in general the market volume in broadband services is dynamic. In the case of the broadband market which is closely linked with unbundling, it is not a matter of a "zero sum game"; the market shares gained by alternative providers will not actually be poached from Swisscom. As prices fall as a result of the opening-up of the market, the market volume will also increase, and Swisscom, given its good initial position, will also benefit from this. A similar mechanism has been observed in recent years in the mobile telephony market.

In the interest of consumers and the Swiss economy, the Commission hopes that a fair solution acceptable to all sides is found as quickly as possible, so that further undermining of competition can be prevented and a favourable climate can be created for investment in Switzerland.

The mobile market and the regulations for implementation of the decree on protection from non-ionising radiation

The interim phase before the introduction of UMTS is being used by the mobile telephony providers to introduce GPRS (General Packet Radio Services). This technology, based on GSM, not only promises higher data transmission rates but also offers the possibility of testing the market potential of new data services with an eye to the introduction of UMTS.

With regard to the number of users and handset sales, the initially strong growth rate of the mobile telephony market is expected to flatten out further – a normal state of affairs given a penetration rate of 73% of the population. Many mobile customers, after their first contact, will probably now

be in a phase of accumulating experience and skills in using the new technology. After this stage, and with new terminals, the broad mass of customers should also begin to show more interest in new data services. The explosive spread of mobile telephone technology is unprecedented – and this understandably also leads to fears and scepticism about this innovation.

The Commission is concerned about the long delay which has occurred in the definition of the implementation regulations for the decree on protection from non-ionising radiation (Verordnung über nichtionisierende Strahlung – NISV). This has regrettably led to great legal uncertainty and confusion among cantonal and municipal authorities, the population and operators. To ensure that the further development of a technology which is central to the future of Switzerland is not put at risk, the Commission considers that it would be desirable to bring the implementation regulations into force quickly.

Broader considerations concerning the decree and the implementation regulations should also include the fact that UMTS is an adaptive technology; i.e. transmission power – and therefore radiation as well – is flexibly reduced to a minimum during a call depending on the distance to the antenna and the data traffic. New intelligent antennas will transmit more accurately in the direction of the mobile user. This reduces general radiation and increases capacity. The provision in the appendix to the decree which is not adapted to UMTS, to the effect that maximum transmission power must always be measured, therefore punishes a technology which is particularly progressive.

II. The Commission and its Secretariat

1. The Commission

In the past year the composition of the Commission remained unchanged. With the re-election in December 2000 of the seven Commission members¹¹ for the 2001-2003 period, the Federal Council again expressed its confidence in them.

The Commission met eight times in 2001 – not counting the study trip to Scandinavia. This amounted to a total of eleven days of sessions. In addition, a considerable amount of time was spent on studying extensive documentation not related to decisions and on preparation for the sessions (one to two days per session) and decisions taken by way of circulation.

2. The Secretariat

There were hardly any changes for the secretariat during this year. The secretariat is managed by the secretary to the Commission, the only full-time position. He is supported by an administrative secretary, a 60% position. The post of scientific adviser, which also covers the functions of deputy secretary to the Commission and webmaster, was increased to a 60% position.¹²

Finally, at the end of the year the secretariat decided on a full overhaul of the Commission's website, with a view to improving and modernising it. The internet relaunch is scheduled for mid-2002.

¹¹ Cf. Appendix I: Commission members

¹² Cf. Appendix II: Collaborators of the secretariat

III. Activities of the Commission

1. Interconnection

Interconnection allows interlinking of different telecommunications networks and services, by obliging market-dominant operators and all providers of services forming part of the universal service to guarantee access to their network for other providers¹³. Interconnection therefore guarantees that new operators who do not have their own network or who have only an incomplete network are nevertheless able to provide their services. The law stipulates that providers should first try to come to an agreement by way of negotiation (the primacy of negotiations). If, after three months, no interconnection agreement has been reached, an interconnection application may be lodged with the Commission. OFCOM then examines the case. If the statutory mediation procedures still produce no result, the Commission fixes interconnection prices and conditions.¹⁴

1.1. Leased lines and transmission media: Commcare vs. Swisscom

On 2 October 2000, the Commission – as explained in detail in the last annual report – reached its decision in the main matter for the procedure concerning leased lines and transmission media, thereby concluding the procedure.

Each of the two parties submitted a complaint against this decision by ComCom to the Federal Court. Commcare was of the opinion that the situation relating to transmission media had been appraised incorrectly by the Commission. Swisscom in turn contested the obligation to provide leased lines under interconnection conditions and applied for suspensive effect of the complaint. On 15 December 2000 the Federal Court granted suspensive effect and finally, in its far-reaching decision of 3 October 2001, both approved Swisscom's appeal and rejected that of Commcare.¹⁵

In its judgement the Federal Court came to the conclusion that neither leased lines nor transmission media could be subject to the interconnection regime, since there was no adequate legal foundation for this; in this judgement the Federal Court additionally already expresses itself quite in detail on the question of unbundling.

For the Federal Court it does not seem sufficient that in view of the dynamics of this sector the legislature set out, in the Law on Telecommunications, to explicitly restrict itself to a generalised, technologically neutral form of legislation in order to allow a flexible reaction to further dynamic technological or legal developments in Europe. According to the Federal Court it is now up to the

¹³ LTC Art. 3, para. e and Art. 11.

¹⁴ On the interconnection procedure cf. DTS Art. 49-58.

¹⁵ Cf. details in the chapter entitled "Trends and Effects of the Federal Court's Administration of Justice".

Federal Council or Parliament to clarify what falls under the interconnection obligation by means of corresponding amendment of the text of the laws and decrees.

The leased line prices of the market-dominant provider cannot therefore be regulated. This is expected to be a financial burden on Swisscom's competitors who are forced to rely on such lines and above all on Swiss SMEs, adversely affecting their competitiveness. The Federal Court has also critically limited the Commission's freedom of action to impose an interpretation of the Law on Telecommunications which would stimulate competition (for example in the case of an interconnection application for unbundling).

This decision not only makes Switzerland a special case in the European context – the EU is currently making major efforts to reduce leased line prices – but it is above all sending out a persistent negative signal which is endangering the competition which has been nurtured with such effort, as well as the investment which has already been made.

1.2. Mobile termination: diAx vs. Swisscom

In 1998 and 2000 respectively, the diAx company (now TDC Switzerland) submitted an interconnection application for the Commission to determine mobile termination prices. This relates to two interrelated procedures. In both cases, the party opposing the application was Swisscom: the earlier procedure was concerned with the prices which Swisscom has to pay for termination (i.e. for routing calls to end users) on the diAx mobile radio network. The later interconnection application of 2000 was concerned with the remuneration paid by diAx for Swisscom's corresponding mobile termination prices.¹⁶

On 3 April 2001, in the more recent of the two procedures the Commission fixed mobile termination prices for international calls within the framework of precautionary measures. However, in the case of termination of national calls and calls to 0800 numbers the Commission decided against the diAx application, because no irrecoverable disadvantage was to be feared for diAx. The complaint subsequently lodged by Swisscom was approved by the Federal Court on 24 July 2001, thereby rescinding the Commission's decision.

Immediately before the announcement of a definitive decision by the Commission both parties applied in autumn 2001 for a suspension of the procedure for one month. Within this period the parties actually reached agreement on all the disputed points, even though this had not been possible in the preceding mediation negotiations. The Commission was therefore able to conclude the two procedures in early November 2001.

¹⁶ Cf. also activity reports of the Federal Communications Commission for 1999 and 2000.

1.3. Procedures according to the "Long Run Incremental Cost" (LRIC) calculation model: MCIWorldcom vs. Swisscom and diAx vs. Swisscom respectively

In April 2000, as explained in detail in last year's report, the two companies diAx (now TDC Switzerland) and MCI Worldcom independently submitted an application for the implementation of interconnection prices on the basis of the calculation model which had been in force since the beginning of 2000: "Long Run Incremental Costs" (LRIC). In both cases it is contested whether Swisscom's interconnection offering for the year 2000 corresponded to the LRIC principles. The time-consuming examination procedures, with various expert reports, economic clarifications and applications for inspection of records, are in progress at OFCOM.

1.4. Unbundled access to the local loop: diAx vs. Swisscom

On 31 July 2000, the diAx company (now TDC Switzerland AG) lodged an interconnection application for unbundling with the Commission.

Unbundling is not explicitly dealt with in the Swiss Law on Telecommunications. It was therefore a matter of using the interpretation of the law to determine whether unbundling constitutes a case of interconnection according to the LTC and whether the current legal provisions are adequate to oblige Swisscom to unbundle its subscriber lines.

As outlined in the last annual report, on 9 November 2000 the Commission enforced precautionary measures which obliged Swisscom to offer the "Bitstream Access" variant of unbundling in parts of Switzerland. In addition, both parties had to work out a standard offering for the "Shared Line Access" and "Full Access" services within three months.¹⁷

Swisscom lodged a complaint against this decision with the Federal Court. On 12 December 2000 the Federal Court granted suspensive effect and approved the complaint on 13 March 2001. The precautionary measures were lifted, with the justification that they would cause Swisscom an irretrievable disadvantage.

As a result of the above-mentioned decision of the Federal Court on 3 October 2001 in the Commcare case, the Commission's margin of interpretation in interconnection procedures was substantially restricted. The restrictive interpretation by the Federal Court of the term interconnection makes it impossible to open up the market for the last mile by way of the existing conditions for interconnection. The Federal Court not only came to the conclusion that leased lines would not fall under the interconnection obligation because of the absence of a legal basis

¹⁷ Cf. decision available on ComCom site (section "Publications – Decisions"): www.fedcomcom.ch

but also already expressed itself in detail and in a similarly negative fashion on the question of unbundling.

Since ComCom is obliged to respect the interpretation of the law by the Federal Court and since the general conditions no longer allow any margin of interpretation, the Commission considered itself regretfully obliged to reject the application by diAx (now TDC) for unbundling of the local loop.¹⁸

The need for action is great, both on unbundling and on leased line prices. From the economic viewpoint, the Federal Court's interpretation of the law is preventing the competition which is desired by the legislators and in the Commission's opinion is leading to long-term economic disadvantages.¹⁹ Since the Commission's hands are tied on unbundling, it is hoping that the Federal Council will make changes at decree level. The Federal Council had indeed established in its response of 31 May 2000 to the interpellation by National Councillor M. Ehrler that on the one hand the provisions on interconnection in the laws and decrees had deliberately been formulated in a way which was neutral in terms of technology and services, hence "unbundling of the local loop can also be implemented in respect of market-dominant providers of telecommunications services."²⁰ On the other hand, however, the Federal Council also signalled its readiness for a change to the decree should the framework of an interconnection procedure or developments in the EU indicate that there is a specific legislative need for unbundling.

2. Licences

This chapter gives an overview of the Commission's activity in the year 2001 in the domain of licences. The only award procedure started in the reporting year was that for the universal service licence. As far as the licences awarded by the Commission in previous years were concerned, 2001 saw adaptations and transfers of licences in individual cases (e.g. after the merger of Sunrise and diAx). In the case of the UMTS licences, the Commission also subjected the licence conditions regarding infrastructure sharing to examination.

In principle, the Commission, as the licensing authority pursuant to Art. 5 para. 1 of the Law on Telecommunications, is responsible for granting all licences to telecommunication services providers and those for utilisation of the frequency spectrum. The Commission, however, has

¹⁸ This decision of the Commission on 5 February 2002 has since acquired legal effect.

¹⁹ Cf. the explanations in the chapter entitled "Results of the Liberalisation Process and Perspectives".

²⁰ Response of the Federal Council dated 31.05.2000 to the interpellation "unbundling of local access" by National Councillor Melchior Ehrler (24.03.2000, 00.3139, cf. www.parlament.ch).

delegated the responsibility for granting certain licences to OFCOM, namely for telecommunications services when these are not subject to an invitation to tender (e.g. fixed network service licences without frequencies), as well as for those radio licences which are not intended for the provision of telecommunications services (e.g. radio licences for amateur radio operators or transport companies' private radio links). This chapter addresses only those licences granted directly by the Commission.

2.1. WLL licences

The licences granted on 5 June 2000 for the Wireless Local Loop (WLL) oblige the licensee to establish and maintain commercial operation with at least one base station within one year of award of the licence.

Accordingly, in June 2001 OFCOM, as the supervisory authority, examined compliance with this operating obligation and informed the Commission that the majority of licensees were meeting this minimum requirement. However, it is to be noted that in summer 2001 the operating obligation was only just being met.

In two cases, justified applications for a short extension of the deadline for compliance with the operating obligation were submitted and approved by the Commission.

In general, unfortunately, the erstwhile extremely optimistic forecasts regarding the market potential of WLL technology have not been fulfilled – and even its future is uncertain. WLL will not therefore be a serious alternative to Swisscom's last mile and here too the hoped-for stimulus to competition did not occur.

2.2. UMTS licences

The UMTS licences²¹ were auctioned on 6 December 2000. The award procedure was completed with the granting of licences at the end of January 2001 to Orange, TDC Switzerland, 3G Mobile and Swisscom. Since all the auctioned frequencies would only be available to the licensees from January 2002 onward, the reporting year was an interim phase which the licensees were able to use for network planning, site acquisition and tests.

The Commission also attentively observed further technological development relating to the components for UMTS networks in the year 2001 and recognised that new possibilities for infrastructure sharing were opening up here. Progress in network technology makes it possible for

²¹ UMTS: Universal Mobile Telecommunications System.

certain network elements to be combined into one physical unit, but operated as logically separate, i. e. independently controllable network elements. The necessary independence of operators will not be compromised in the case of logically separate network elements and control over the frequencies allocated to them remains in the hands of the operators (no frequency pooling).

The joint use of infrastructure can bring economies when a network is constructed. The very strict Swiss limits laid down in the decree on non-ionising radiation, however, restrict the positive effects of infrastructure sharing in the sense of a reduction in the number of antenna installations.

In view of the impending major investment by the licensees, the concerns of environmental protection and protection of the countryside, as well as technological developments, the Commission, basing itself on clarifications by the Federal Office of Communications (OFCOM), came to the conclusion that the UMTS licences for third-generation mobile telephony are sufficiently flexible to allow extensive co-use of the radio infrastructure. This solution does not adversely affect competition in the infrastructure domain, which the Law on Telecommunications sees as a basic prerequisite for effective competition in services. Furthermore, no changes to the licences are necessary. At the end of January 2002, the Commission communicated these appraisals to the UMTS licensees by way of a notice. With this interpretation of the licences, the Commission is applying an approach which is similar to that of other European countries such as Germany and France.

Since technology continues to develop quickly and since network infrastructure is a sensitive area with regard to competition policy and telecommunications law, the Commission will examine specific models for joint use of the infrastructure on a case-by-case basis – in so far as the operators submit any corresponding applications.

In the interests of protection of the environment and the countryside, the Commission has already obliged the GSM and UMTS licensees to co-use antenna installations (operations building and antenna mast), in so far as sufficient capacity is available and this is technically, economically and legally feasible. The licence also provided for co-use of antennas and of their link to the base station (Node B). With its interpretation of the licence, the Commission now additionally allows co-use in particular of Node B and of the Radio Network Controller (RNC), if these can be controlled independently by each sharing partner.

2.3. GSM licences

The only point to report concerning the second-generation GSM²² mobile radiocommunications licences is that in the reporting year, the GSM licence of diAx was transferred to the company TDC Switzerland, following the merger of Sunrise and diAx. The GSM services and all other products of the new company TDC Switzerland are now provided under the Sunrise brand name; in 2001 the name diAx gradually disappeared.

2.4. Universal service

In the Commission's view, the universal service is an important keystone of market liberalisation, since it pre-empts any regional or social discrimination in access to the most basic means of social communication. A basic offering of telecommunications services of high quality and at reasonable prices as enshrined in the Law on Telecommunications must be provided throughout Switzerland. This universal service for the population is fully guaranteed today in all parts of the country – and this will not change in the future.

By virtue of the transitional arrangements in the Law on Telecommunications, Swisscom was assigned the universal service licence until the end of 2002 and Swisscom was therefore obliged to guarantee the universal service. At that point in time the universal service licence will be granted anew.

It is the Commission's task to periodically invite tenders for the telecommunications universal service and to award it by means of a competition based on criteria. In autumn 2001 the Commission decided to award a country-wide universal service licence. Because of the dynamic developments both in technology and in the markets, the Commission also restricted the term of the licence to five years. One advantage of this relatively short licence term is that within this period it is not only easier to make a better estimate of financial compensation for uncovered costs but it is also highly probable that the content of the universal service, to be defined by the Federal Council, will remain unchanged.

On 27 November 2001 OFCOM launched the tender for the award procedure on behalf of the Commission. Candidature dossiers could be submitted until 1 March 2002. In order to ensure a smooth transition, the Commission will grant the new licence by the end of June 2002 at the latest.

On the basis of an initial analysis by OFCOM the Commission will assess the submitted candidatures on the basis of specific criteria. Both the sequence of the multi-stage evaluation

²² GSM: Global System for Mobile Communication.

procedure and the criteria for the decision are laid down in the tender documents. Basically, the universal service licence will be granted to the bidder who best fulfils the evaluation criteria and at the same time does not demand an investment contribution. If all bidders apply for an investment contribution, the licence will be awarded to the bidder whose bid shows the most advantageous ratio between the service offered and the investment contributions required. If no suitable candidate or no candidate at all presents itself, the Commission will designate a licensee and determine any investment contribution.

It is within the remit of the Federal Council to adapt the content of the universal service periodically to technological and market developments as well as to social and economic needs. The Federal Council also decides on the qualitative requirements of the services and on price ceilings.

With regard to the award of the licence, at the end of October 2001 the Federal Council re-specified the content of the universal service. Here are the most important decisions of the Federal Council.²³

- connection: the upper price limit for an analogue connection remains unchanged at max. CHF 23.45 /month (excl. VAT). There is a new entitlement to a digital connection (e.g. ISDN) at a maximum price of CHF 40.00 /month (excl. VAT). Another new charge which was introduced was a uniform charge for setting up the connection (a one-time charge of CHF 40.00).
- call charges: the upper price limits for national calls were reduced in accordance with the actual development of the market.
- public telephones: in principle, each political municipality has an entitlement to at least one public telephone. Because of the popularity of mobile telephones and the consequent reduction in the use of telephone kiosks, the minimum number of public telephones was reduced somewhat.

²³ For detailed information cf. Federal Department for the Environment, Transport, Energy and Communications press release dated 31 October 2001 and the Decree on Telecommunications Services (DTS) of 31 October 2001 (version: 22 January 2002). The Federal Council has additionally decided that costs of the network will be calculated according to book values and not on replacement costs.

3. Numbering Plan

In March 2000 ComCom decided on the introduction of the new closed E.164/2002 numbering plan (an identical format for local and national calls), in order to meet the growing demand for new numbers and to guarantee a sufficient number of addressing resources.

The transition to the new plan took place on 29 March 2002.²⁴ After this date it became necessary to use the area code – the national destination code – for both local and national calls, not only on the fixed network but also on the mobile network. Apart from the fact that the area code became a fixed part of the number, all the previous numbers and area codes remained unchanged. The previous arrangements for calling from abroad were also unchanged, since the leading "0" need, in this case, not be included in dialling.

In the special case of the Zurich network group, the transition to the new plan will take place in several stages. As far as the area code 01 is concerned, the same applies here as for the other network groups: it must be included in dialling from 29 March 2002. From March 2005 all numbers with the 01 code will change automatically to code 044; during a two-year transition period, i.e. until March 2007, however, both numbering systems (01 and 044) will continue to be used in parallel. New subscribers in the Zurich network group can already be allocated a number which begins with 043 or 044, in order to save them the bother of future conversion. However, the area code 044 is almost completely reserved for the future migration of 01 numbers.

Numbering 2002 will not in principle have any effect on call charges, except in the case of pre-selection, because the call will be set up and charged by the respective selected provider.

In order to ensure the best preparation of telephone users for the changeover to the new plan, informing the population was a central concern this year.

The responsibilities were split as follows: ComCom adopts numbering plans and laid down the deadlines for their implementation, whilst OFCOM manages the plan and co-ordinates the preparatory technical and information campaigns concerning the new numbering system. It is the task of the telecommunication services providers concretely to implement Numbering 2002 for their own subscribers and their partners. They are responsible in particular for informing their customer base.

In order to guarantee regular and smooth communication between all those concerned, the Communication co-ordination group led by OFCOM met regularly and decided on measures to be taken.

The introduction of the new plan required users to adopt new habits. An OFCOM questionnaire in December 2001 showed that 56 percent of the population knew something about an impending

²⁴ For further information see: www.num2002.ch

changeover but only 12 percent were aware of the actual date for implementation. Finally only 16 percent of those questioned indicated that they already included the area code when making local calls.

OFCOM then intensified its information campaign, which had been launched at the end of 2000. First of all, in autumn 2000 all associations, organisations, telecommunication services providers Swiss companies and municipalities were contacted by letter. Subscribers were informed via an OFCOM brochure which they received with their telephone bill for May 2001. The information campaign aimed at the public was started in November 2001. It ran using newspaper advertisements and the internet and was intensified from February 2002, when the transition to the new plan loomed larger, with new advertisements, posters and commercials.

4. National Frequency Allocation Plan

The national frequency allocation plan contains the frequency bands allocated in Switzerland and provides a comprehensive overview of the use of the frequency spectrum in Switzerland; this prescribes the current or planned, generally internationally co-ordinated type of use of each frequency band.

As stipulated in the Law on Telecommunications (Art. 25. para. 2), on application from OFCOM the Commission approved the new national frequency allocation plan which entered into force on 1 July 2001. Most changes are based on stipulations by the CEPT and on the results of the ITU World Radiocommunication Conference 2000. Here, for example, expansion ranges for UMTS were prescribed as a precaution. Furthermore, as part of pan-European harmonisation of certain frequency ranges it was stipulated that CT1+ and CT2 cordless telephones in the 900 MHz range will only enjoy protection from interference until the end of 2005; the DECT system, which is harmonised Europe-wide, exists as an alternative.

5. Carrier (Pre-)Selection

In the area of carrier selection the Commission dealt with the question of administrative procedures which the telecommunication services providers use among themselves for processing pre-selection orders (CPS orders). In order to reduce the administrative effort involved, providers now have the possibility of recognising independent bodies of trust, which verify verbal CPS orders from subscribers. On the basis of this arrangement, the providers have introduced the TPV (Third Party Verification) procedure. This means that subscribers can place their pre-selection orders by telephone; the call is recorded using an interactive voice system and can therefore be checked at a later time.

The Commission also detailed the introduction of control over pre-selection by subscribers themselves. The new system is intended above all for private users with a standard telephone

connection (an analogue or ISDN basic interface). They will be able activate and deactivate their pre-selection or query the status of pre-selection directly, using the telephone keypad.

6. Measures in Supervisory Procedures

It is OFCOM's duty to monitor compliance with the provisions of the law, decrees and licences. If an infringement of licences or violation of the applicable law is suspected, OFCOM initiates a supervisory procedure. Where applicable, the Commission decides on measures proposed by OFCOM, which may extend from correcting the fault via imposing supplementary conditions on a licence through to revoking of the licence (Art. 58 LTC).

In the reporting year 2001 the Commission did not have to initiate any supervisory procedures.

7. Study Trips by the Commission

On a three-day study trip in the summer the Commission visited different authorities and companies in Estonia, Finland and Sweden. On the one hand meeting other specialist authorities provides a direct insight into the regulatory activities and trends in the international environment. On the other hand, visits to manufacturing companies which not only produce the network infrastructure and terminals but also carry out research into the products of the future give a concrete impression of the technological developments to be expected in the medium term. These informative aspects are of key significance for the activity of the Commission, whose activities are often future-oriented.

During the visits to both the Finnish regulatory authority, the Telecommunications Administration Centre, and the Estonian National Communications Board the focus was on an exchange of experiences extending over a broad range of topics. In the case of the visit to the Estonian regulator, it became clear that great efforts have been made in post-Soviet Estonia to develop a modern, competitive telecommunications market – not least with the aim of becoming closer to the EU. With the major reduction in telephone prices and regulated interconnection tariffs, initial successes were apparent after only eight months of liberalisation. By means of state support for opening up the different parts of the country to broadband services, Estonia is trying to seize what will probably be a one-off development opportunity.

It is precisely in this area that Sweden is generally quoted as a prime example: as a basis for the "information society for all" project being propagated in Sweden, the government decided in the year 2000 to invest a total of more than CHF 800 million in a national backbone network and in regional networks which are to link the main locations in the municipalities. Municipalities have to contribute resources of a similar amount. In addition, private individuals and businesses enjoy

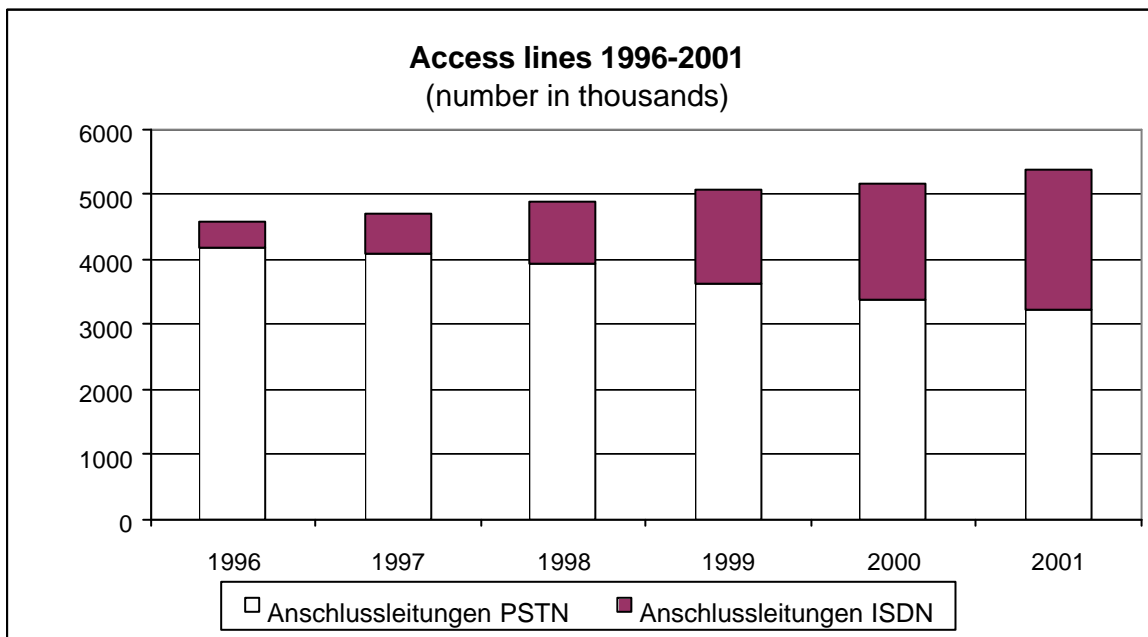
temporary tax benefits for introducing broadband connections. During its visit to representatives of different ministries the Commission was able to obtain information not only on infrastructure aspects but also on measures to increase knowledge and acceptance of the new information and communications technologies. One such measure which stands out particularly is a comprehensive teacher training programme.

A lively discussion took place with the Nokia and Ericsson companies on market developments since the various UMTS auctions in Europe in 2000. Nokia gave the Commission a detailed insight into current trends in wireless technologies and the related service platforms, including, as a complement to far-ranging UMTS, WLAN technology for applications in public buildings with a high density of use and in homes. The possibilities of infrastructure sharing in particular were discussed in greater detail. In Ericsson's WCDMA-DemoCenter it was concretely demonstrated to the Commission for the first time how, for example, video images and conversations can be transmitted live to a mobile unit.

IV. Market development: key statistical values

In this context, ComCom has for two years published figures²⁵ which give a brief overview of the development of the telecoms market in Switzerland. In law, OFCOM has the task of drawing up the official telecommunications statistics every year. For further information, please refer to the OFCOM website²⁶.

The number of **telecommunication services providers** in Switzerland continues to increase, although the growth which began with liberalisation of the market has slowed down. Thus at the end of 2001 there were 348 telecommunication services providers, i.e. 33 more than in the previous year (+10.5 %). These include 156 (+2) telecommunication services providers subject to compulsory registration, 131 (+15) with a licence and 3 with a GSM mobile radio licence. Despite the considerable number of telecommunication services providers, the total number of interconnection agreements is growing only very slowly; at the end of 2001 there were 77 such agreements.



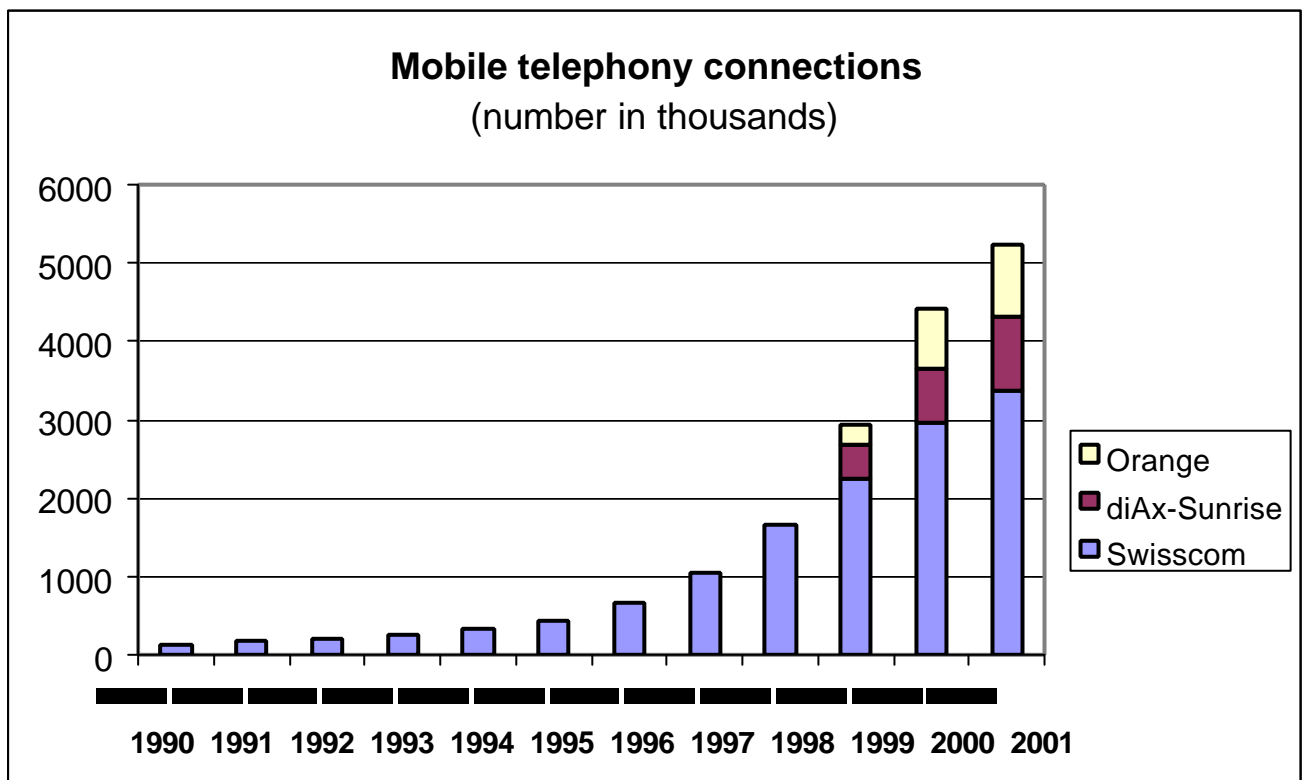
²⁵ Reminder: analysis in the same year is not possible, given compilation and processing of data from all the telecommunication services providers. Most of the figures used here and published by OFCOM are estimates based on the data which were provided by the most important Swiss telecommunication services providers.

²⁶ <http://www.ofcom.ch/de/medieninfo/statistiken/index.html>

As far as the use of the **fixed network telephony** infrastructure is concerned, a constant decline in the number of analogue connections in particular is apparent (-4.4 %), in favour of ISDN digital connections (+21%). Within a year the number of access lines²⁷ to the telephone network grew by more than 4 % so that at the end of 2001 Switzerland had 74.1 subscriber lines per 100 inhabitants.

The growth of the Swiss **mobile radio market** slowed down somewhat in 2001; this is not really surprising given the high market penetration of almost 73 % at the end of the year.

With a **market share** of 63.8% at the end of 2001, Swisscom continues to occupy a dominant position on the mobile radio market, although the historic provider lost 3.2% market share. With a market share of 17.9% Sunrise has moved up to second place. Orange stagnated at 17.5%, even though the number of customers increased by about 18%. For all three providers it can be stated that in the past year they were again able to enjoy substantial growth in subscribers.



²⁷ A figure which unlike main lines also includes the total number of ISDN channels.

The difference between the number of **prepaid and postpaid subscriptions** is getting smaller on the whole. The ratio between prepaid and postpaid subscribers today is 41% to 49%.

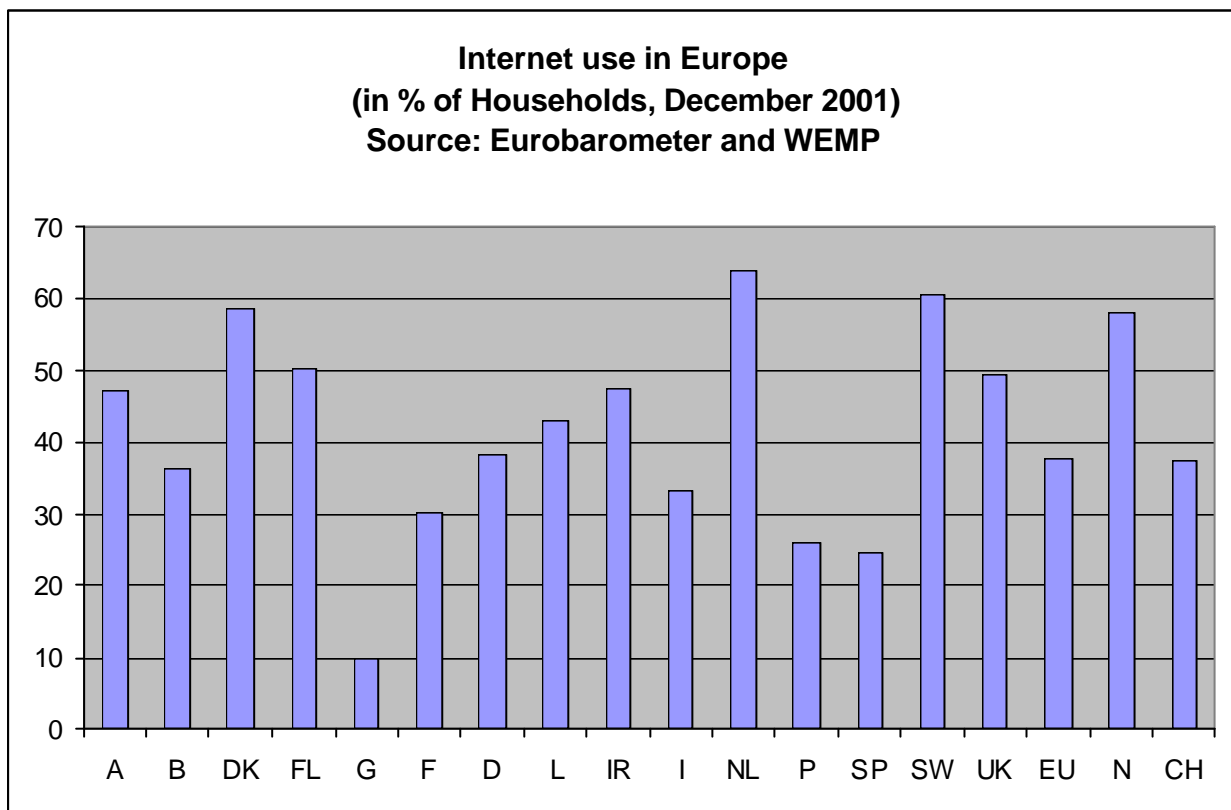
Tariff changes are the most tangible development for consumers. On the **fixed network telephony** side, the trend since liberalisation towards lower prices did continue in the year 2001, but slowed down somewhat (-6% in the year 2001 compared with -16.8% in the previous year). As a reaction to competitors, Swisscom above all reduced tariffs markedly in 2001 (-14%). The reporting year was therefore characterised by a degree of adaptation of fixed network prices.

In **mobile telephony**, on the other hand, prices between 2000 and 2001 have remained stable; today, the tariffs of the individual providers hardly differ from one another. In the case of mobile radiocommunications, competition is apparent not so much in the sphere of prices as in the subsidising of mobile telephones and differentiation in terms of offerings; this was also the case last year.

If **employees** of only the three most important providers in Switzerland (Swisscom, Sunrise and Orange) are taken into account, it is apparent that these data provide a very accurate reflection of the current market situation in the sector. The total number of people employed by these three providers remained relatively stable compared with the previous year. Growth was only +1.25% and at the end of 2001 the number of employees was 24,896; this represents a slowdown in the creation of new jobs in the telecommunications industry. The reasons for this are company liquidations, restructuring (e.g. Swisscom) and the merger of Sunrise and diAx. Swisscom, for example, again reduced its personnel by about 3%, whilst Orange significantly increased the number of its employees (+7.5%). If one not only considers the employees of the telecommunication services providers but also includes the supplier side, according to Protelecom some 43,000 people work in telecommunications companies.²⁸

Finally, with regard to the **development of the internet in Switzerland** it is possible to state that the proportion of the population equipped with personal computers – a key factor in the development of the information society – continued to increase over the past year. At the end of 2001 there were approximately 4.9 million units, indicating an increase of 14.8% within two years. Growth since the year 2000 was only 5.1%. The growth in computer sales fell for the first time last year, reflecting the high level of equipment owned.

²⁸ Protelecom Annual Report 2001, February 2002, p. 4.



Legende : A=Austria, B=Belgium, DK=Denmark, FL=Finland, G=Greece, F=France, D=Germany, L=Luxembourg, IR=Ireland, I=Italy, NL=Netherlands, P=Portugal, SP=Spain, SW=Sweden, UK=United Kingdom, EU= EU-15 average, N=Norway, CH=Switzerland

About 39% of Swiss households used the internet in December 2001; this corresponds to the European average. It is more reliable to consider not only home use but also use at work, in schools and in public places: here Switzerland is ahead of countries such as Great Britain and Germany.²⁹

²⁹ EURO-JICs Pan European Internet Surveys 2002, www.ejic.org

V. Summary of the Commission's Activities

Interconnection procedures

- Leased lines and transmission media ⇒ On 3 October 2001 the Federal Court rescinded the ComCom decision in which the latter had subjected leased lines to the interconnection regime and fixed leased line prices. Swisscom can therefore continue to fix leased line prices at will.
- Mobile termination ⇒ The parties reached an agreement shortly before the announcement of the definitive decision by the Commission. The procedures were concluded.
- Procedures according to the LRIC calculation model ⇒ The time-consuming examination procedures are in progress at OFCOM.
- Unbundling ⇒ On the basis of the absence of a legal basis cited in the decision of the Federal Court on 3 October 2001 the Commission was begrudgingly obliged to reject the unbundling application.

Licences

- Universal service ⇒ A new universal service licence will be granted by the Commission by the end of June 2002 at the latest. On 27 November 2001 a tender procedure was launched for a national universal service licence for 5 years.
- Wireless Local Loop, WLL ⇒ The Commission has examined whether the obligation under the licence to operate at least one base station commercially after one year has been met.

GSM, second-generation mobile radiocommunications system

⇒ As a result of the merger of Sunrise and diAx the GSM licence of diAx was transferred to TDC Switzerland.

UMTS, third-generation mobile radiocommunications system

⇒ The Commission has attentively followed the further development of UMTS technology and subsequently decided to allow extensive joint utilisation of radio infrastructure.

Numbering

⇒ From 29 March 2002 onwards the area code must be dialled even for local calls. This will constitute the transition to a closed numbering plan in Switzerland. In order to ensure that this passes off smoothly, OFCOM launched a broad information campaign in 2001.

National frequency allocation plan

⇒ On 1 July 2001 a modified frequency allocation plan entered into force.

Carrier (pre-)selection

⇒ To simplify carrier (pre-)selection, two new procedures were authorised: third party verification and pre-selection controlled by the subscriber himself.

Berne, 22 April 2002

In the name of the Commission

The President

Dr. Fulvio Caccia

Appendix I: Commission members

President:

Fulvio Caccia

Vice President:

Gian Andri Vital

Members:

Christian Bovet

Pierre-Gérard Fontolliet

Beat Kappeler

Heidi Schelbert-Syfrig

Hans-Rudolf Schurter

Appendix II: Collaborators of the secretariat

Secretary to the Commission: Peter Bär

Scientific officer and webmaster: Pierre Zinck

Administrative officer of the secretariat: Verena Verdun