

Ofcom

Business report 2000

When you read this report you will realise just how wide-ranging are the activities of OFCOM, the Federal Office of Communications. For instance, apart from «classic» regulation in the telecommunications and media sector, we are also responsible for radio as a whole – from examining amateur radio operators through locating the causes of radio interference to frequency planning e.g. for mobile radio and broadcasting. In practice, this means paying close attention to those details which are absolutely essential for communications to function but which are barely perceptible to the public. To this must be added our strategic and political tasks, which are a matter of public discussion virtually every day. Examples include planning of the universal service in telecommunications, adapting the law on radio and television to the breakneck pace of development towards convergence, or co-ordinating all the measures which are essential for an information society.

Our activity is increasingly characterised by the volatility of the telecommunications market. We were obliged to learn this dramatically at the time of the auction for the UMTS licences, as the great downturn in the telecommunications market occurred towards the end of the year. We deliberately allowed the market to operate during the licence allocation procedure and maintained a framework of credible regulation, applying the rules which had previously been laid down. For Swiss consumers it is critical for the new technologies and free frequencies to be made available as quickly as possible – the market will either accept or reject those technologies.

One factor is unavoidable: conflicts of aims will increasingly occur in our activities. Often the goals of the telecommunications market are not the same as those of protection of the environment, government finances or data protection, to cite just a few examples. With regard to the different interests involved, it will be indispensable in the future to promote discussion even earlier, even more clearly and even more vigorously. Viewed in this light, communications are becoming more political. Those who believe that telecommunications or communications in general are merely a matter of technology are deceiving themselves. In the pages which follow we would like to explain these relationships in greater detail.

All our activities, be they «daily business» or matters of fundamental importance, must be open, consistent, and always friendly and appropriate. And efficient too, of course! This is why the last year has been particularly characterised by our attempts to provide these services at a lower cost and to charge them to the appropriate originators. In this context, it helps that OFCOM is a «NPM» office: it is managed with a performance specification and a global budget. We have a cost/performance account which allows us to account accurately for more than 170 products. Such instruments are not yet common in the public administration and are not easy to introduce. They allow OFCOM to demonstrate a growing awareness of costs, a more pronounced «customer understanding» and better cost transparency towards the outside world. A transparency which, moreover, also serves as a byword for this business report.

Marc Furrer, General Director

Foreword	1
Contents	3
Management report	4
Performance report	7
Radio and television	7
Telecom Services	12
Radio licences and equipment	18
Frequency management	20
International affairs	25
Outlook	28
Personnel	31
Finance report	34
Annex	38
Impressum	40

Since 1999 OFCOM has made itself available, in a pioneering role, for application of the principles of New Public Management (NPM) in the Swiss federal administration. These pilot projects are being conducted under the FLAG concept (FLAG: management with a performance specification and a global budget). In the reporting year we were able to conclude the first performance specification period, 1999 – 2000.

Management of the administration office

In the first two years we have made use of the increased operational freedom of action compared to the customary form of federal administration. Understanding of modern administrative management continued to increase in the second FLAG year. It was possible to improve operational resources. Management personnel showed exceptional leadership and responsibility with the emphasis on goal-oriented performance. A rethink took place at all levels with regard to our performance specification. The definition of goals for the range of over 170 products facilitated this process. Discussion with employees as a basis for «goal-oriented management» proved successful.

However, the limits and conceptual problems already acknowledged in 1999 with regard to the implementation of FLAG and confronting an office with predominantly sovereign tasks, were confirmed. For OFCOM it continues to be difficult to define quantitative performance indicators in the area for which it is solely responsible. The rules in the financial sphere still leave too little room for manoeuvre. For example, we are not allowed to carry forward financial resources which have not been exhausted to the new business year. The extra costs associated with FLAG and imposed on the core business, as well as the imbalance between cost and benefit, continue to prove problematic. A working group with representatives from all FLAG offices, set up especially for this purpose, is currently attempting to solve the most important problems.

We have learned the first lessons from the performance specification period which has just been completed and have arranged for corrections to be incorporated into the performance specification for the period 2001-2003. The new performance specification has been improved with particular reference to strategic objectives (above all performance indicators for each product group) and financial transparency.

Finances

The financial result, which is again a good one, confirms, amongst other things, the continued growth in cost-awareness. Among other things we have managed without the external consultancy services whose planned budget was some two million francs and we made purchases which were cheaper than expected. Operational accounting procedures were improved. For the first time, the imputations are based on the asset accounting system which has been in operation since mid-2000. We now enjoy substantially better cost transparency for future pricing of OFCOM products and on 1 January 2001 implemented the first amended fees. In the new performance specification period this gives us the opportunity to better fulfil our statutory task, by covering the cost associated with each individual product by the price. Licensees pay only those costs which they actually give rise to.

Personnel policy

With 260 full-time posts, personnel figures moved within the same margins as in the preceding year. 27 new staff joined the organisation and 33 either left or took up new positions, meaning we now have 285 members of staff. Thanks to tighter management of personnel resources – due in part to internal job rotation – we were able to partially compensate for the difficulties in recruiting personnel with legal and technical training from a labour market which has dried up in our sector.

After the good experience with the first two trainees in media/IT we would like to train more trainees and placement students. In the future, in each academic year, we shall therefore take on two young people for training. From 2003 OFCOM will consequently be employing 6 trainees simultaneously. In the reporting year, in addition to the trainees, we also trained university placement students in the legal sector.

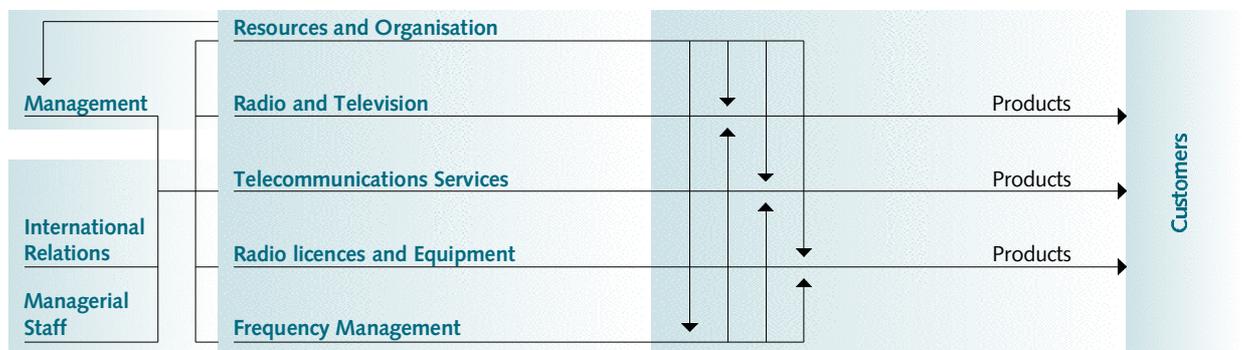
Outlook

OFCOM is going through a further year of consolidation in all FLAG areas. Product managers now also budget financial resources from the viewpoint of individual product goals. Thus we shall also be adapting the cost accounting system to the new situation and simplifying aids at all levels. In this context, the information provided will correspond better to the individual requirements of operational management (OFCOM) and strategic management (the Federal Council, the Department and Parliament).

Organisationally, OFCOM is sub-divided into three 'product divisions': Radio and Television (RTV), Telecommunications Services (TC) and Radio Licences and Equipment (Funkkonzessionen und Anlagen - FA) which provide services for external customers. The Frequency Management (FM) and the Resources and Organisation (BO) divisions, on the other hand, work primarily for the product divisions. The Frequency Management division, for example, handle the planning, allocation and monitoring of frequencies, as well as corresponding research work. The classic internal services in the areas of personnel, finance, IT and logistics are combined in the Resources and Organisation Division (Betriebswirtschaft und Organisation - BO). The International Relations (IR) Service co-ordinates international activities and Switzerland's representation in specialist international organisations.

Following the trend towards convergence of electronic media and telecommunications, OFCOM is one of the few organisations world-wide to combine these two areas under one roof. As a consequence of this, the Office reports to two different authorities.

On the one hand, the Office prepares work concerning the electronic media for the Federal Council and the Federal Department for the Environment, Transport, Energy and Communications, makes the necessary applications and implements the decisions. On the other hand, it is active in the telecommunications sector for the Federal Communications Commission (ComCom), which is competent as an independent authority in this area.



Radio and television

Key areas related to radio and television in the reporting year included on the one hand thorough legislative reform and on the other hand consolidation of the existing broadcasting environment. Whereas the preparatory work for the revision of the Radio and Television Law (LRTV) has the strategic re-alignment of Swiss broadcasting policy as its objective, day-to-day activities centred on minor adaptations to the market.

The entry of new players into the market was no longer a characteristic feature of developments in broadcast radio; rather, the focal point was the repositioning of existing enterprises. Such restructuring processes are extremely complex, in view of the largely saturated mar-

ket, and this imposes some demanding requirements on the processing of licence applications (television applications in eastern Switzerland, applications from local radio stations for a change in the Federal Council's directives relating to FM transmitter network planning).

National / regional linguistic radio broadcasting

In the market for national/regional linguistic radio broadcasting, the trend towards packaged offerings was reinforced. In the year 2000, the Federal Council licensed five new radio stations which provide niche programming with popular genres of music. These are without exception low-cost stations from existing broadcasters, which are distributed by cable and which generally rely on the production infrastructure of private radio stations.

In the case of television, the assumed saturation of the market was confirmed. New entrants are therefore confronted with tough competition for markets. The German broadcaster RTL/Pro Sieben Schweiz ceased transmission after only five months. Other broadcasters attempted to enter into co-operation with major media corporations: examples include the participation of the German music TV channel Viva in S Media Vision AG (Swizz) and the Ringier publishing company in Sat.1 Schweiz.

<http://www.bakom.ch/eng/subsubpage/document/64/1414>

Local/regional radio

The key feature at local/regional level is the trend towards diversification and consolidation. Even regional radio companies are gradually adopting the strategy of the larger stations, offering different products according to the segmentation of the audience (Radio Top Two, Radio aktuell zwo, Radio 32 Goldies). It is also apparent that local programme makers need to reach a certain critical size to face up to future multimedia requirements. In the Grisons, for example, the radio stations, in conjunction with the local TV station, are planning a merger into a single sponsoring company. There are similar intentions in canton St. Gall. Applications for amendments to the Federal Council's directives for the FM transmitter network plan (central and eastern Switzerland), in order to achieve greater transmission coverage, are another new feature. These attempts are also an expression of the intense struggle between stations in these regions which are dominated by publishing companies and those which are independent of publishers.

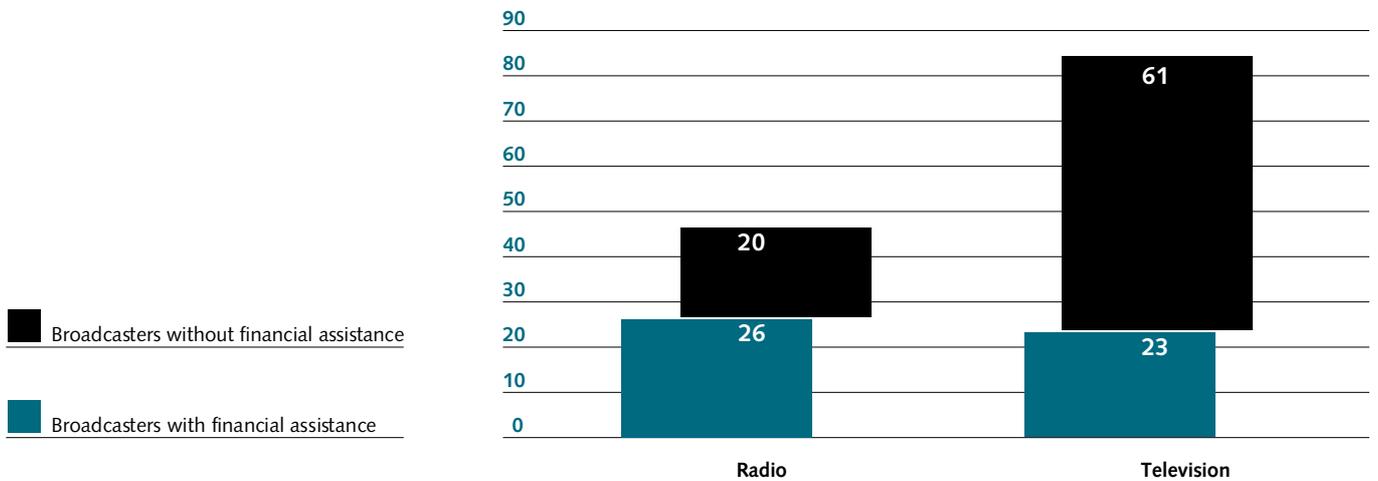
In French-speaking Switzerland, after two years of negotiations with the French frequency management authorities, it was possible on the night of 2-3 November 2000 to change more than 40 FM frequencies. This action, which is intended to produce better reception quality in the regions around Lake Geneva and in the Chablais region, is the result of the excellent co-operation between OFCOM, the Swiss Radio and Television Company (SRG) and the private stations involved. The stations which benefited from this were RSR La Première, Espace 2, Couleur 3, DRS 1, RSI 1, Lausanne FM, Radio Chablais, Radio Lac, ONE FM and Radio Framboise.

<http://www.bakom.ch/eng/subsubpage/document/64/1413>

A new model was introduced for allocating proportions of the reception fees to the local radio stations. In accordance with modern quality management principles, it is no longer the broadcast programme which is the key factor; rather, a check is carried out on whether the station has the organisational and personnel resources to improve programming conditions as per the statutory performance specification (input rather than output control). The qualifications of the personnel employed and training measures are also important.

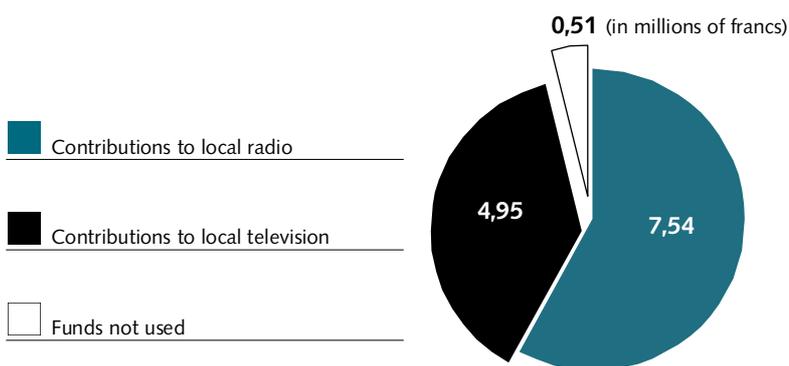
Fee splitting 2000

Number of broadcasters



Fee splitting 2000

Total available funds: 13 million



International radio broadcasting

On 20 September 2000 the Federal Department for the Environment, Transport, Energy and Communications (DETEC) approved the new coverage concept for Swiss Radio International (SRI) for the years 2000 – 2004. Analogue short-wave broadcasts in the priority coverage areas (Africa and South America) will be retained until the end of 2004. Furthermore, the website («swissinfo.org») will be supported in order to meet SRI's performance specification.

Reception fees

In December 2000 the contract between DETEC and Billag AG for collection of radio and TV reception fees was signed, after Billag AG had been successful in the public invitation to tender launched in December 1999. The agreement is to come into force at the beginning of 2001 and will put the fee collection system onto a new and more efficient footing.

Supervision

OFCOM decisions on advertising, sponsorship and technical broadcasting can now be accessed via the Internet. This service is intended primarily to contribute to informing radio broadcasting companies and, in a preventive fashion, to help ensure that their practice is adapted to the applicable statutory regulations.

http://www.bakom.ch/eng/subpage/?category_58.html

Key projects

Revision of the Radio and Television Law (LRTV)

Activity in the radio and television sector was strongly characterised by the work being done on a new Radio and Television Law (LRTV).

In January the Federal Council adopted a discussion paper prepared by OFCOM, laying down the strategy for a new Radio and Television Law. Within the framework of a so-called «dual» system, on the one hand the SRG will provide a comprehensive and competitive public service, whilst on the other hand the latitude for private radio and television companies will be extended.

<http://www.uvek.admin.ch/doku/presse/2000/d/00012002.pdf>

On this basis, the draft for a new Law was drawn up within OFCOM and approved in December by the Federal Council. At the end of 2000, the draft, with the corresponding explanations, was submitted for the consultation process; this will take until April 2001.

<http://www.bakom.ch/fre/news/506/506.pdf>

http://www.bakom.ch/special/rtvg/rtvg_erl_f.pdf

Digital Video Broadcasting (DVB)

In May 2000 we launched a project related to technical and political clarification concerning the possible introduction of digital terrestrial television. With reference to the European planning conferences (which will probably be held in 2003 and 2005), the conditions must be met to ensure the effective representation of Swiss interests. A DVB platform ensures contact with the Swiss players in the world of digital television. This body ensures the optimal exchange of information between the administration and interested outside parties.

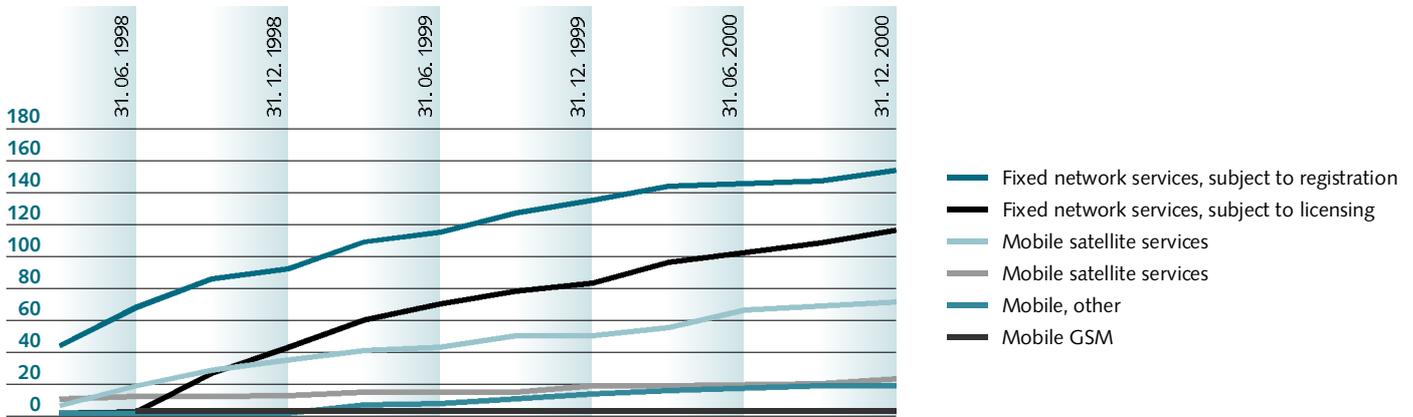
Digital Audio Broadcasting (DAB)

In the reporting year, OFCOM completed the DAB pilot project in the Bernese Oberland. It was possible to integrate the transmitter network set up in the course of the trial into the national network. A CD-ROM on the pilot trial can be obtained from OFCOM. Since spring 2000 the SRG has been providing 55 percent of the Swiss population with DAB coverage. In the European arena, this means that Switzerland has the best coverage. Experience with the new broadcasting technology at the technical and economic level has been good. However, the SRG – with DETEC's agreement – has delayed further expansion because of bottlenecks in equipment production and in the reception equipment market. At an OFCOM information event held in November 2000, with representation from all the interested parties, however, there was cautious optimism about future development. We are looking into the possibilities of releasing technical resources for DAB in the VHF sector. An invitation to tender for DAB capacity for private radio companies might be a possibility in late 2001/early 2002.

Telecom services

After having to guarantee access to the liberalised Swiss telecommunications market for new telecom companies in the two preceding years, the reporting year was characterised above all by enforcement of the rules (supervision). It was also important to prepare and develop the next steps in this dynamic market. For example, new licences were granted for wireless subscriber connections over the 'last mile' (Wireless Local Loop - WLL), a complementary technology to fixed connection by cable or telephone lines. On behalf of the Federal Communications Commission (ComCom), we organised the auction for UMTS licences, thereby laying the foundations for the broadband mobile data services of the future (third-generation mobile telephony). In the area of universal service relating to telecom services, the initial preparatory work was carried out on an invitation to tender for the universal service licence(s) which is/are expected to come into force from 2003. The new providers in the telecom market were able to expand their business into additional sectors of the value-added chain. Interconnection disputes accordingly became more complex and more fundamental.

Development in the number of telecommunication services providers since 1998



At the end of 2000, 315 telecommunication services providers were registered with OFCOM. Of these, 161 were required to be licensed, because they operate substantial systems independently. 83 providers were newly registered or licensed

Implementation of the so-called R&TTE Directive of the European Union proved to be quite a task (see the chapter on Radio Licences and Equipment, page 18) regarding notification of the interfaces by the different service providers. In this context, the list of services of all providers was also updated. A summary of the interfaces can be found in the revised list of all service providers on the OFCOM website.

http://www.bakom.ch/Service_Provider_Liste/welcome_e.html

Further statistics and figures on the Swiss telecommunications market can also be found on the OFCOM website:

http://www.bakom.ch/eng/subpage/?category_69.html

Universal service

In the course of the year 2001 the universal service licence(s) will be put out to tender; they will come into force from 2003 onwards and will replace the current Swisscom licence. As part of the preparation for the invitation to tender, the content of the universal service was examined and the development of supply and demand in the market was analysed. Key areas are, on the one hand, the extension of the law to electronic individual communication and on the other hand the relaxation of individual regulations in view of the intensity of competition which reigns. The form of the licence (one national licence or several regional licences) and the future administration of the universal service budget were also examined. Appropriate consultations will be launched in the first half of 2001.

Mobile radio

Apart from the invitation to tender for UMTS licences and licences for the additional GSM frequencies which will soon be available, on behalf of ComCom we carried out a clarification of

requirements for the granting of a licence for a national digital trunked radio network (for use by haulage companies, taxis, public transport, etc.). Interest in a national licence was moderate because of the immaturity of this market, competition from the safety radio network and GSM, as well as the pressure of the financial markets on telecommunications companies. An award for regional networks is now being examined. In co-operation with the swiss conference of building, planning and environment directors, the competent federal authorities and the network operators, recommendations and conditions for co-ordination of the construction of mobile radio antennas were drawn up under OFCOM's leadership. The conditions were adopted in the GSM, UMTS and WLL licences. The intention is to stem the uncontrolled growth of antennas and to construct new networks with greater respect for the landscape.

http://www.bakom.ch/eng/subpage/?category_110.html

Allocation of blocks of numbers

OFCOM allocates blocks of numbers to the service providers from which the providers allocate individual telephone numbers for use by their customers. Because of growth, the entry into the market of additional service providers and the first shifts in market share, the demand for blocks of numbers remained strong, though not as strong as in 1999. In the reporting year, 240 blocks of 10,000 numbers and 450 blocks of 1000 numbers were allocated. The slowdown in growth of number allocation, however, is a sign of consolidation of the market. This trend is confirmed by the number of carrier selection codes allocated. The following table shows developments since the market was opened up:

Number of CSC codes, blocks of 1000 and 10,000 numbers

Year	1997	1998	1999	2000
Carrier Selection Codes	52	68	143	53
1000 E.164 number blocks	22	73	282	455
10,000 E.164 number blocks	220	332	509	240

With the involvement of the service providers, we have drawn up detail specifications for the allocation, beginning in September 2001, of alphanumeric numbers in the 0900 and 0800 number ranges. Allocation of all numbers will be carried out electronically via the Internet. This will be one of the Confederation's first comprehensive e-government projects; not only will it be possible to place orders and allocate numbers over the Internet, but the production process in OFCOM will also take place and be controlled completely electronically. With regard to the New Numbering Plan 2002 on 29 March 2002, some important preparatory work has been completed (technical and administrative regulations for implementing the plan) and the first communication measures were introduced under the slogan «From 2002 always use the area code» (with information being sent to all businesses in Switzerland so that the necessary measures can be planned in good time).

http://www.bakom.ch/eng/subpage/?category_98.html

Interconnection

In the area of interconnection, Swisscom introduced a pricing scheme based on forward looking long run incremental costs on the basis of the stipulations of the Decree on Telecommunications Services. The new tariffs, however, were not accepted by all providers. Two applications for fixing interconnection prices were submitted to ComCom. In the case of these procedures, OFCOM carries out the official investigation. Legal proceedings were begun regarding two other procedures, one concerning unbundling of the local loop. As for most procedures, we draw up applications for decisions with reference to precautionary measures for ComCom. The complex and time-consuming Commcare interconnection procedure on the subject of leased lines and transmission media could be concluded by a ComCom decision which was prepared by OFCOM. Swisscom's interconnection obligation for leased lines in the subscriber line sector was affirmed. The consequences are lower prices in this segment, to the benefit of competitors. The decision was contested in the Federal Court.

Joint elaboration of regulatory principles

In co-operation with representatives of the service providers we are layout the groundwork for technical and administrative regulations for emergency call routing, switching carrier preselection, indication of charges and technologies of the connection networks. Co-operation with the service providers under the leadership and moderation of OFCOM experts has proved successful.

Supervision

Several supervisory procedures were initiated in order to implement the rules for fair competition and for protection of consumers in the telecommunications market. The cases prepared by OFCOM concerned compliance with the coverage obligation by a mobile radio operator, compliance with upper price limits by Swisscom as the universal service licensee, implementation of carrier selection call-by-call in a mobile radio network, compliance with the period of 5 days for switching carrier preselection in a fixed network, and the delay in establishing a site database by the universal service licensee. Other supervisory procedures had to be initiated because of negligence in the provision of data for official statistics. In this connection, ComCom also imposed administrative sanctions. One of these was referred to the Federal Court and confirmed by the latter. As far as such measures are concerned, we rely on instruments which are intended to reduce the temptation to infringe the regulations and to promote self-discipline and self-monitoring. One example is the penalties agreed under civil law in the event of infringement of the principles of fair rules in competition (e.g. the period for switching carrier preselection).

Digital signature

The decree on electronic certification services entered into force on 1 May 2000. Although the production of the technical and administrative implementing regulations was subject to delay because of the co-operation with external specialists, substantial progress could be made with

regard to the recognition of the first certification services providers (certificates for the digital signature). The enforcement regulations are the subject of a consultation with the relevant experts. This recognition system for signature services constitutes a major step towards the introduction of the digital signature and hence the promotion of confidence in electronic commerce and dealings with the authorities.

http://www.bakom.ch/eng/subpage/?category_104.html

Information Society Co-ordination Group (ISCG)

The Federal Council noted the second report of the Swiss Information Society Co-ordination Group (ISCG) and its recommendations for actions. Priority is being given to electronic communications with government (e-government) as well as education and training. Whilst specific key projects and appropriate budgets could be initiated in the first area, the ISCG is of the opinion that there continue to be obstacles on the road to a consistent programme for a nation-wide campaign promoting the first stage in schools. Key areas in terms of requirements are education content for Switzerland as a whole, training and further training for teachers (including Internet training and teaching) and nation-wide equipping of schools with the necessary infrastructure. The discussion on this subject is ongoing.

<http://www.isps.ch/>

Key projects

Wireless Local Loop (WLL)

In spring 2000 the auction was held for three national licences and five regional licences in each of nine regions, despite an appeal to the administrative court by one candidate; suspensive effect was not granted and the candidate subsequently withdrew its complaint. Thanks among other things to favourable conditions at the time and the great interest of the financial markets in telecommunications companies, it was possible to raise an unexpectedly high amount of more than 582 million francs. Most of the licences went to companies which wish to enter the Swiss market and provide new (broadband) services. Consequently, an interesting contribution to innovations in the strategic sector of broadband services is to be expected in some segments of the markets. The first operational base station was commissioned in December 2000.

http://www.bakom.ch/eng/subpage/?category_99.html

Third-generation mobile radio: UMTS

Six months later, on the occasion of the UMTS auction, the situation was less favourable. The original number of ten authorised candidates for four practically symmetrical licences fell – somewhat surprisingly – to four in the final days before the commencement of the auction. One factor among others was that the financial markets were refusing further loans to the telecom-

munications companies. Since on the very eve of the auction the fifth candidate had withdrawn, or rather officially announced a merger with one of the remaining candidates, we decided, after consulting ComCom, to postpone the auction. After examining the effect of the merger on the Swiss market and all possible variants for the subsequent procedure, ComCom decided to hold the auction in accordance with the original rules, with a minimum bid of 50 million francs. In this way, the Commission wanted to comply with the clear rules of the UMTS call for tenders, avoid delays in licensing and ensure that the new technologies would become available in Switzerland as soon as possible. It was not possible to allocate the licences because of the slightly different quality of the four licences. In addition, the minimum price of 50 million francs corresponded to the minimum value also current in other countries. The four licences were granted to diAx, Orange, Swisscom and Telefonica, for a total of 205 million francs.

http://www.bakom.ch/eng/subpage/?category_105.html

Radio licences and equipment

With regard to market licensing of telecommunications equipment, OFCOM has decided in favour of clear technical deregulation and has therefore been consistently implementing a European Union directive since 1 May 2000. Business and industry must enjoy rapid access to the market. Deregulation and the use of new communications technologies will substantially alter activities in the area of radio licences and equipment.

Telecommunications equipment

Implementation of the new European directive on radio and telecommunications equipment (the R&TTE Directive) in Swiss law on 1 May 2000 has led to a major reduction in the number of type approvals for telecommunications equipment. Whereas 650 items of equipment were approved in 1999, the number was only 185 in the reporting year. The number of new procedures for conformity assessment, which provide for compulsory registration instead of prior inspection of telecommunications equipment, increased accordingly. In the course of the year, manufacturers and importers made use of this registration procedure more than 500 times. This is the result of technical deregulation, which invokes the responsibility of manufacturers and dealers themselves. In this way, equipment can be brought onto the market more quickly, especially when new technologies are being introduced. In four seminars, we informed participants in the market of the possibilities of easier market access for new telecommunications equipment. Further activities are planned in order to meet the growing demand for information from the public as a whole.

http://www.bakom.ch/eng/subpage/?category_100.html

Radio licences

Some of the Swiss fees for radio licences have to date diverged considerably from the European average. They were therefore amended on 1 January 2001. As a result, charges for professional radio licences in particular can be considerably reduced in many cases.

The number of radio licences in most categories also fell slightly in the reporting year. The most strongly affected area was CB radio, which is available for leisure-time communication to anyone who is interested. The decrease is due, among other things, to competition from other means of communications such as GSM.

Access to amateur radio was facilitated by the introduction of the entry-level licence (amateur radio licence 3) on 1 May 2000. This fulfilled a long-cherished wish of Swiss ham radio operators. The examination requirements for the required certificate of competence were simplified accordingly in the subject area «principles of electrical engineering and radio technology». Interest in this additional type of licence is confirmed by the number of candidates who have already passed the examination.

Evolution in the number of licences

Year	1996	1997	1998	1999	2000
Professional radio licences	14'971	15'382	13'318	13'017	12'312
Ships licences	1'232	1'262	1'252	1'302	1'342
Mobile flight radio licences	4'669	4'594	4'507	4'414	4'342
Amateur radio licences	4'661	4'653	4'592	4'508	4'465
CB licences	24'036	20'698	18'059	15'172	12'325

Radio operators' examinations

Novice Certificate for Radioamateurs	43 candidates
Radiotelegraph Operator's Certificate for Radioamateurs	56 candidates
Radiotelephone Operator's Restricted Certificate for the Maritime Mobile Service (valid on board yachts)	52 candidates
Restricted Radio Operators Certificate	270 candidates
VHF Radio Operator's Certificate for the Radiotelephone Service on Inland Waterways	38 candidates

Market verification of telecommunications equipment and radio licences

Apart from dealing with notifications, faults and inspections, we have above all been involved in carrying out market monitoring activities, as a result of the introduction of the R&TTE Directive. Whereas, in the past, telecommunications equipment was inspected for compliance with the technical regulations before being permitted onto the market, on the basis of the new directive this inspection now takes place only after an item of equipment has been introduced onto the market.

In the year 2000, in the radio licences and telecommunications equipment division, we placed 1,204 market inspection orders. These resulted in 577 administrative penalty procedures. We also processed 173 orders for retroactive verification of conformity in accordance with the fundamental requirements of the R&TTE Directive. As a result of the R&TTE Directive and in line with the EU Commission's intentions, an increase in corresponding inspections is planned for the coming years. In the directive's introductory phase, the emphasis is on providing information and clarification for the participants in the market - a task which will continue to be important in the future.

Monitoring of radio and television reception fees

In the reporting year, on the basis of notifications from Billag AG, the company which collects radio and TV reception fees, we dealt with 1,811 orders in connection with unlicensed viewers and listeners. In total, 2,293 administrative penalty procedures were implemented. This figure includes completed procedures from the preceding year. The procedures serve as a last resort for persuading unlicensed viewers and listeners to pay the reception fees. One central task in the reporting year involved redefining Billag's work in this area and assisting the company in organising these tasks.

Frequency management

In frequency management, where most activities (frequency planning and frequency allocation) often take place years before the commercial launch and use of telecommunications and broadcast radio services, foresight is of the essence. However, regulation in the radio sector also means ensuring optimal parameters, in the interests of the economy, for the ever denser radio environment. Key areas here are a reliable planning and legal environment, incentives to optimise the use of resources and quality assurance (Radio Monitoring).

In the reporting year, in planning terms, the world conference in Istanbul with the corresponding preparations within the framework of the CEPT/ERC (European Conference on Post and Telecommunications / European Radio Committee) and the preparation of digitisation in broadcast radio were of particular importance. The new form of the national frequency allocation plan was adopted by ComCom in the reporting year.

http://www.bakom.ch/eng/subpage/?category_63.html

Centre of competence for radio technology

The centre of competence examines compatibility between different radio systems and lays down the conditions for parallel operation of these systems and/or migration from old to new systems. Within the framework of the CEPT, the centre made a substantial contribution in the following areas, among others:

- _____ Development of a new method for trans-frontier third-generation mobile radio services (UMTS), in conjunction with the Technical Institute of Biel.
- _____ Definition of a new measurement method and measurement of the radiation characteristics of Power Line Communication (PLC) systems, in collaboration with a Swiss manufacturer. Performance of compatibility tests based on these measurements.
- _____ Acceptance tests for the statistical tool for interference calculations (SEAMCAT).
- _____ Compatibility tests, using SEAMCAT, in the sphere of «short range devices» and the «Bluetooth» systems. This new simulation tool allows a realistic assessment of the technical possibilities of wireless links to electronic devices in homes and commerce, such as wireless speakers, headphones, screens, computer networks, etc., which eliminate the need for expensive wiring.

In the forthcoming decade, today's common analogue television systems will be replaced by digital DVB systems (Digital Video Broadcasting). The new technology will further merge the boundaries between radio and telecommunications (e.g. as a result of interactive applications). Coverage of the population with TV programmes over the air (so-called «terrestrial» broadcasting, in contrast with cable or satellite systems) will therefore undergo a radical change. The FM Division, with its technical and regulatory know-how, is participating in the corresponding key projects of the RTV Division (see also the chapter on RTV.). Together with the Technical Institute of Biel, the centre of competence is currently carrying out a feasibility study for the migration of terrestrial radio broadcasting services from analogue to digital technology.

Frequency allocation for mobile radio

In the reporting year, fundamental work was performed in the area of frequency allocation on the licensing of the additional GSM frequencies, which became available as a result of the decommissioning of the analogue Natel C network. In addition, we prepared the technical basis for the invitation to tender for a digital trunked radio network. The preparation of transmitter data in connection with application of the decree on non-ionising radiation (Verordnung über den Schutz vor nichtionisierenden Strahlen - NISV) was another similarly important and labour-intensive task, as was the production of the technical appendices relating to the UMTS licences.

<u>GSM network descriptions</u>	<u>1999</u>	<u>2000</u>
Base stations	3'000	4'600

Frequency allocation for microwave/satellites

With the signing of the corresponding agreements, the utilisation of frequencies for Fixed Wireless Access (FWA) systems, e.g. Wireless Local Loop (WLL), with neighbouring countries could be regulated and set on a sound footing. The establishment of mobile radio services is dependent on timely provision of more and more frequencies for the access networks of the three

mobile radio operators. In total, we allocated some 1550 new links. At the same time, as a result of network optimisation, other microwave sections are constantly being decommissioned, and this involves considerable work on updating the databases, as well as international notifications and co-ordination activity.

New microwave sections	1999	2000
	1'370	1'550

Decommissioned microwave sections	1999	2000
	1'000	1'500

Frequency allocation for radio broadcasting

The preparatory work on digitising the radio broadcasting environment is in full swing. In particular, completion of the relevant technical data imposes some demanding requirements. Nonetheless, analogue radio coverage will remain the most important medium for the next 10-15 years. The FM transmitter network will therefore be continually optimised. One high point of this planning work, carried out in close co-operation between OFCOM and the broadcasting companies, was the «nuit bleue»: during the night of 2-3 November 2000, forty FM frequencies in the area around Lake Geneva and in the Chablais region were changed (see also the chapter on radio and television).

Radiation tests	1999	2000
	39	48 (including 31 with outside partners)

Key projects

Implementation of the decree on non-ionising radiation

On 1 February 2000, on the basis of the law on protection of the environment, the Federal Council brought into force the decree on non-ionising radiation (Verordnung zum Schutz vor nichtionisierenden Strahlen - NISV). As a result of this, the long-prepared and hotly disputed legal foundation for assessing transmission equipment is finally available. The decree specifies precautionary values for zones of sensitive use; these values are approximately ten times lower than the customary values world-wide. Switzerland therefore has considerably stricter environmental protection requirements than other countries. This fact and the new stipulations and definitions contained in the decree are causing major difficulties in practical implementation.

Under these conditions, internationally recognised methods of measurement and assessment are not applicable in Switzerland as supplementary aids for evaluating the precautionary values. The competence centre on electromagnetic compatibility and the environment (EMV / EMV-U) therefore provided the Swiss Agency for the Environment, Forests and Landscape

(BUWAL) with technical support when the new aids to implementation were drawn up. Whilst the necessary resources were not available, we assisted the authorities in the cantons and communities with provisional measures.

http://www.bakom.ch/eng/subpage/?category_110.html

_____ World radio conference (WRC-2000)

At the four-week conference of the International Telecommunications Union (ITU) in Istanbul numerous conditions for utilisation of the frequency spectrum and satellite orbits were agreed at a global level. The most important of these are:

- _____ Three new frequency bands are available to those countries which would like to introduce third-generation mobile radio systems (IMT-2000 – e.g. UMTS).
- _____ Additional frequencies were allocated to the satellite radio navigation service, with reference to the new European radiolocation system, GALILEO.
- _____ Frequencies were provided for High Density systems in the Fixed Services (HDFS).
- _____ A new plan for satellite radio broadcasting was adopted for Europe, Africa and the Asia-Pacific region.

The results which were achieved must be hailed as a success for Europe and for Switzerland. The excellent preparatory work performed by the 43 European states within the framework of the CEPT made a substantial contribution. OFCOM allocated considerable resources to this area in terms of personnel during the reporting year.

<http://www.itu.int/newsroom/press/releases/2000/13.html>

_____ Reorganisation of Radio Monitoring

The organisation of the Radio Monitoring section, with seven manned measuring stations in Switzerland, will be replaced in the next few years by a more efficient structure. From 2004 onwards the tasks of the Radio Monitoring section will be performed for the most part in Biel. In place of the manned measuring stations, three intervention offices located in Gudo, Châtonnaye and Zurich-Höngg will take over. If a change of use and sale of the building in Châtonnaye is a feasible solution, this site will be shut down, in favour of Lausanne. In order to guarantee intervention times which are as short as possible, a «satellite» office of the field offices will operate after 2004 in each of the regions of Geneva, Thurgau/St. Gall/Zurich and Solothurn/Basel. As soon as normal personnel fluctuation allows, the personnel at the distributed sites will be reduced. The desired co-operation between the market supervision departments from the Radio Licensing and Equipment divisions and Radio Monitoring is to be implemented. In the process all parts of the concept project will be implemented as soon as possible. These re-organisations are intended to maintain the current high standard of radio monitoring services, make them more efficient, if possible, and adapt them to new requirements.

<http://www.bakom.ch/eng/subsubpage/document/243/1466>

Interference notifications to Radio Monitoring

Year	1999	2000
Perturbations	530	511 (of which 60% FA, 30% RTV, 10% TC)

Hours spent 8'152

Integration of the Frequency Management division in OFCOM allows direct, comprehensive preliminary clarification for numerous projects from other OFCOM divisions. Examples include the following projects: Power Line Communications (PLC), revision of the law on radio and television (LRTV), Digital Audio Broadcasting (DAB), Digital Video Broadcasting (DVB), UMTS, Wireless Local Loop (WLL) and Spectrum Pricing (see reports from the divisions managing the projects).

International affairs

World summit on the information society

The International Telecommunications Union (ITU) is planning a world summit on the topic of the information society for 2003. On the basis of a Federal Council decision, we submitted the official candidature of Geneva to the ITU as the venue for this event. Among other things, this opportunity will be exploited to discuss the digital divide between developed and less developed states. The general secretary of the ITU will decide on the candidatures of Switzerland and Tunisia by the spring.

Work on reforms

UIT

Various international organisations in whose work OFCOM participates are in the throes of a reform process. Thus we have committed ourselves to a more flexible and more efficient ITU (International Telecommunications Union) in order to meet the new challenges of the telecommunications market and industry. In view of the growing trend towards liberalisation, the tasks of the individual sectors of the ITU and the roles of the representatives of the regulatory offices and the telecom industry in the work of the ITU must be thoroughly revised. Extensive progress in this process of reform was achieved at the world conference on standardising the ITU in autumn 2000. In 2001 these reforms are to be consolidated and expanded, and officially accepted at the ITU's 2002 world conference.

CEPT

Switzerland has also committed itself to a more efficient configuration for the CEPT (European conference on post and telecommunications). Under the leadership of OFCOM's Director, a delegation took part in the plenary session of the CEPT in Oslo (in June 2000), at which the decision in principle was taken in favour of a full re-organisation. The eventual structure of the organisation is currently under discussion. We shall attempt to ensure that the CEPT leaves all questions of regulation to the Independent Regulatory Authorities Group (see also the chapter

on IRG) and instead concentrates mainly on radio-related questions, as well as co-ordinating the European position in preparation for the world conference of the ITU, in addition to topics related to numbering plans.

INTELSAT/EUTELSAT

In the course of the year we participated actively in the work of re-organising the two organisations INTELSAT and EUTELSAT. In order to better meet the needs of the new markets and the development of new services, the two organisations will be re-organised with private sector participation.

TV5

In the year 2000, Switzerland chaired TV5 and therefore organised the conference of ministers responsible for TV5. The conference took place under the leadership of Federal Councillor Moritz Leuenberger on 27 October 2000 in Vevey. The ministers agreed that the broadcaster's organisation, with heavy emphasis on national administrations, appeared no longer to meet the requirements of a dynamic media market. Against this background, it was envisaged to set up a multilateral francophone production unit to offer a networked station world-wide.

Other international organisations

IRG

OFCOM plays an active role within the Independent Regulatory Authorities Group (IRG), in which the independent national regulatory authorities of the European Union and European Economic Region states plus Switzerland co-operate. Questions which are dealt with include those of harmonising the principles to be applied to interconnection, unbundling the local loop, granting of licences, etc. Monitoring of the revision of the EU's legal framework for telecommunications, the so-called «99» Review, was of particular importance during the reporting year. We have analysed the EU proposals in detail and are preparing to initiate a partial revision of the telecommunications law in parallel with the EU's own revision.

ICANN

OFCOM represents Switzerland in the «Governmental Advisory Committee» (GAC) of ICANN (Internet Corporation for Assigned Names and Numbers), which is responsible for allocating Internet addresses world-wide. In addition, OFCOM has observer status in the European Union's informal group on «Addressing in the Internet». Within the framework of drawing up regulations for the «.eu» domain extension, the EU wishes to restrict its use to its own member states. Switzerland has proposed that all the CEPT countries be allowed to use this code.

Council of Europe

OFCOM participated actively in the work of the Standing Committee on application of the agreement on trans-frontier television, which in the reporting year dealt above all with exclusive rights. During the Council of Europe conference of ministers, which took place in June 2000 in Cracow, OFCOM's Director, as leader of the Swiss delegation, stressed the need to safeguard the concept of public service, also within the framework of the changeover to digital television. The Council of Europe offers Switzerland, which is otherwise totally excluded from the work of the European Union in the audio-visual sector, an opportunity to help define international media policy at the European level.

The interests of the public will continue to occupy the focal point of our activities in the year 2001. These will take the form of implementing specific services and regulatory measures in order to promote effective competition, particularly in the telecom market, or implementing the public service in broadcast radio, or the universal service in telecommunications. With regard to both regulation and the preparation of decisions, we shall be taking into consideration the implications concerning cultural and governmental policy for the different parts of Switzerland. 2001 is of special importance for the provision of the core instruments which will control the future public service in Switzerland. In the area of electronic media, our draft of the new Radio and Television Law (LRTV) will enter the arena of public discussion. In the telecommunications sector we are preparing an invitation to tender for the new universal service licence.

_____ In the sphere of electronic media, perception of OFCOM will be characterised by the public and political discussion concerning the revision of the law on radio and television. We will be preparing the results of the consultation procedure and the communication for the attention of the Federal Council.

_____ With regard to the convergence of electronic media and telecommunications we shall be discussing the market opportunities for technologies such as DAB (Digital Audio Broadcasting) and DVB (Digital Video Broadcasting) with interested parties. We shall also be preparing the Swiss position on international planning of DVB frequencies.

_____ A further focus will be our role as a co-ordinator and to some extent catalyst in the promotion of the information society. The key areas are e-government and education and we wish to play a pilot role in e-government. The E-OFCOM project will make it possible to process customer transactions electronically over the Internet and the production processes are currently being installed. From autumn 2001, for example, the allocation of alphanumeric telephone numbers is envisaged. From this experience we hope to gain important know-how concerning electronic handling of customer contact and production processes.

_____ After a five-year transitional period, Swisscom's universal service licence for telecommunications will expire at the end of 2002. In the course of 2001 we shall be proposing any necessary amendments to decrees to the Federal Council and shall submit the tender documents to the Federal Communications Commission (ComCom).

_____ From 2002 onwards in Switzerland, the previous area code will be integrated into the – unchanged – subscriber number. We shall be presenting this change as a dialling simplification and as promoting the liberalised telecommunications market.

_____ The European Union is revising its legal framework for telecommunications (the 99 Review); we shall quickly introduce any necessary amendments to Swiss telecommunications law.

_____ We shall continue making efforts to establish appropriate instruments for licensing antennas for mobile telephony, and we shall be continuing the dialogue with the cantons, municipalities, equipment operators and the Federal offices concerned. Our centre of compe-

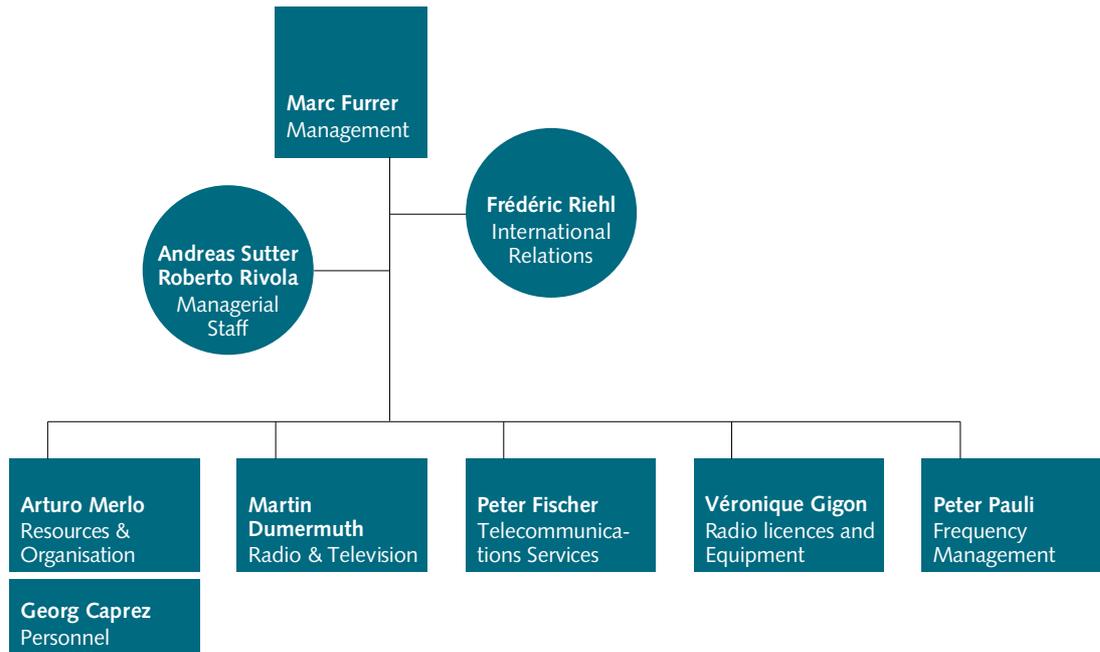
tence for electromagnetic compatibility will be providing pertinent background information on telecommunications law, technology and economic factors as well as interrelationships.

_____ The EU directive on radio and telecommunications terminal equipment (the R&TTE directive) deregulated the introduction of terminals and radio equipment onto the market. We shall be checking our control procedures in order to simplify the administrative procedures in conformity with the directive.

_____ Implementation of the re-organisation of OFCOM's branch offices will continue. Centralisation of certain tasks in Biel and the establishment of intervention points in western, eastern and southern Switzerland will improve efficiency without having to compromise services or make personnel redundant.

Commercial management

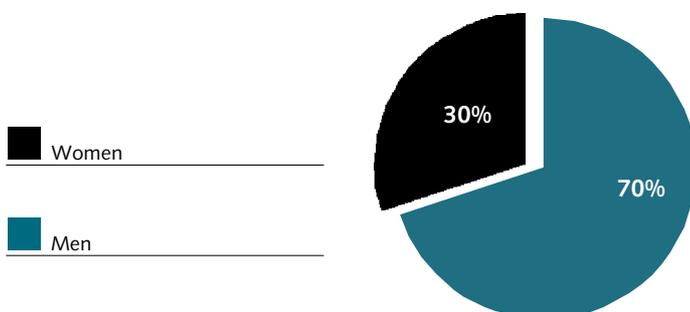
OFCOM's commercial management is performed by: the Director, Marc Furrer, the Deputy Director and Division Manager Peter Fischer (TC), and Division Managers Véronique Gigon (FA), Martin Dumermuth (RTV), Peter Pauli (FM) and Arturo Merlo (BO), the Manager of the International Relations Service Frédéric Riehl, the Personnel Manager Georg Caprez, the Staff Manager Andreas Sutter and the Communications Manager Roberto Rivola.



Statistics

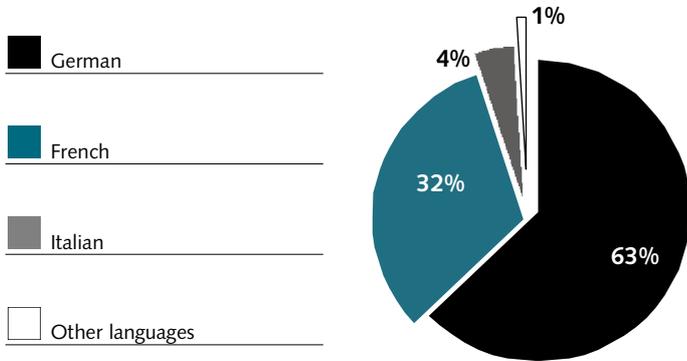
Percentage of workforce by gender

In the reporting year we employed 280 people, of whom 85 were women. This corresponds to 30%.



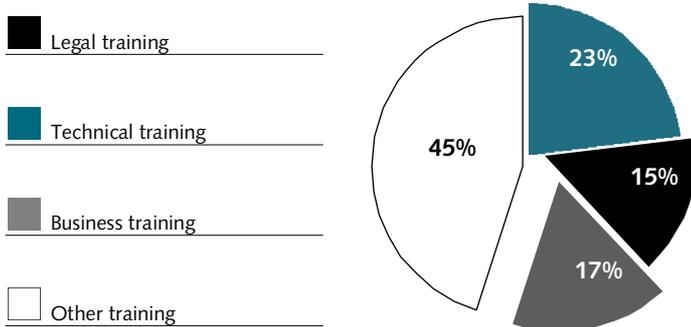
Language distribution

Approximately 63% of employees are of German mother tongue, 32% speak French and 4% Italian. Other languages such as English, for example, are spoken by approximately 1% as their mother tongue.



Professional training

Some 23% of employees have technical training, 15% have completed legal studies and 17% have been commercially trained (see table for details)



In 2000 we employed 2 media/IT trainees. From 2001 onwards, two young people will be trained in media and IT. By 2003, therefore, there will be six trainees.

Study year/number	2001	2002	2003
1	2	2	2
2	1	2	2
3	0	1	2
Total	3	5	6

[You will find comments on personnel policy in the management report.](#)

Personnel figures

1. Personnel (key date 31.12.)

Year	1998	1999	2000
Number of filled positions (converted to 100%)	262,50	270,00	259,45
Number of persons (excl. trainees)	273	286	280
Trainees	1	1	2

Turnover

Arrivals, effective (incl. Swisscom)	115	42	27
Departures and job rotation	18	29	33

2. Personnel structure

	1998		1999		2000	
	Number	%	Number	%	Number	%
Language distribution						
German mother tongue	175	63,87	184	64,11	179	63,48
French mother tongue	85	31,02	88	30,66	89	31,56
Italian mother tongue	10	3,65	11	3,83	11	3,90
Other mother tongue	4	1,46	4	1,39	3	1,06
Total	274	100,00	287	100,00	282	100,00

Professional training

Higher technical education	57	20,80	63	21,95	60	21,28
Legal training	35	12,77	43	14,98	41	14,54
ETH engineers	9	3,28	9	3,14	8	2,84
Industrial management training	13	4,74	14	4,88	14	4,96
Other academic education	19	6,93	16	5,57	17	6,03
Business training	45	16,42	46	16,03	48	17,02
Other training	94	34,31	94	32,75	90	31,91
No training	1	0,36	1	0,35	2	0,71
Trainees	1	0,36	1	0,35	2	0,71
Total	274	100,00	287	100,00	282	100,00

Both in the individual accounting years and over the 1999-2000 period as a whole, OFCOM needed considerably less financial resources than was agreed in the performance specification. In 1999 we needed 10.2 million francs less and in the year 2000 the figure was six million francs less. The savings requirement specified by parliament (4.7 million francs for both years) was therefore exceeded by 350%.

Expenditure

Despite additional tasks which were not incorporated in the performance specification (responsibility for co-ordination on the information society, implementation of the decree on non-ionising radiation), over the two years we were able to undershoot the allocated global credit by a total of 16.2 million francs (13.7%). Operating cost consciousness made it possible to save some six million francs. As a result of difficulties in recruiting technical personnel (especially engineers and lawyers), but also thanks to tight management of personnel resources, in the personnel sector we did not spend 3.3 million francs over the two years. The remaining 6.9 million francs were attributable to reduced contributions to international organisations, projects which were deferred or not implemented and investment which was not made.

Revenue

The extra revenue of 5.1 million francs (+4.5%) in the specified two-year period is primarily due to greater use of the frequency spectrum and the demand for microwave links by the new mobile radio operators Orange and diAx. This meant that the cost coverage in the Telecommunications Services Division was higher than expected. The average total marginal cost contribution of 105% is some 15% higher than expected. As a consequence of these results, OFCOM applied to the Department and the Federal Council for an adjustment to the administrative and licence fees; this was implemented on 1 January 2001.

<http://www.admin.ch/uvek/doku/presse/2000/f/00120401.htm>

Financial situation over the entire 1999-2000 performance specification period

Year	OFCOM account						
	1999	2000	Total	Global Budget	Deviation Fr.	%	
I Financial account expenditure							
Personnel costs	34,0	33,0	67,0	71,7	- 4,7	- 6,6	
Expenditure on fixed assets	8,9	15,0	23,9	35,4	- 11,5	- 32,5	
International contributions	5,6	5,3	10,9	12,8	- 1,9	- 14,8	
Transfer to Dep. ETEC on 1.4.00				- 1,9			
Total financial expenditure	48,5	53,3	101,8	118,0	- 16,2	- 13,7	
II Services in relation to the federal administration	5,9	5,4	11,3				
III Imputations	4,8	3,4	8,2				
./. Investments included in the financial expenditure	- 4,3¹	- 4,5	- 8,8				
Total costs (I-III)	54,9	57,6	112,5	122,8	- 10,3	- 8,4	
IV Federal treasury revenue							
Administration fees	40,0	59,1	99,1	86,2	12,9	15,0	
Administration fees, WLL auction		0,9	0,9		0,9	100,0	
RTV reception fees	7,5	8,5	16,0	26,8	- 10,8	- 40,3	
Total revenue	47,5	68,5	116,0	113,0	3,0	2,7	
V Extraordinary and exceptional items							
Administration fees 1999	+ 9,6	- 9,6					
Administration fees UMTS auction		+ 2,1					
Proceeds for the period ²	57,1	61,0					
Marginal cost contribution (I-III in % re V)	104,0			91,0		14,3	
Marginal cost contribution (I-III in % re V)		106,0		91,0		16,5	

1) The 1999 investments were corrected retrospectively.

2) The proceeds for the period were corrected retrospectively (9.6 million francs of administration fees in the telecom services sector were not entered in the books until the 2000 accounting year).

Account per product group							
Year		1999	2000	Total	Global Budget	Deviation Fr.	%
Telecom services							
	Costs (million Fr.)	18,7	21,4	40,1	48,6	- 8,5	- 17,5
	Revenue ¹ (million Fr.)	30,1	33,7	63,8	46,7	+ 17,1	+ 36,6
	Marginal cost contrib. (%)	161,0			96,0		+ 67,7
	Marginal cost contrib. (%)		158,0		96,0		+ 64,6
Radio and television							
	Costs (million Fr.)	14,0	14,4	28,4	30,5	- 2,1	- 6,9
	Revenue (million Fr.)	8,4	9,5	17,9	27,9	- 10,0	- 35,8
	Marginal cost contrib. (%)	60,0			91,0		- 34,1
	Marginal cost contrib. (%)		65,0		91,0		- 28,6
Radio licences and equipment							
	Costs (million Fr.)	22,2	21,8	44,0	45,6	- 1,6	- 3,5
	Revenue (million Fr.)	18,6	17,8	36,4	38,4	- 2,0	- 5,2
	Marginal cost contrib. (%)	84,0			84,0		0
	Marginal cost contrib. (%)		82,0		84,0		- 2,4

Achievement of specified economies							
Year		1999 mil. Fr.	%	2000 mil. Fr.	%	Total mil. Fr.	%
Expenditure according to financial plan (29.9.97)		60,2		64,4		124,6	
	./. transfer to GS ETEC			- 1,9		- 1,9	
corrected expenditure framework		60,2		62,5		122,7	
	./. expenditure reduction specified economies	- 1,5		- 3,2		- 4,7	
Expenditure performance specification 1999/2000		58,7		59,3		118,0	
	./. expenditure according to annual accounts	48,5		53,3		101,8	
Reduced expenditure according to specified economies		10,2	17,4	6,0	10,1	16,2	13,7
Fulfilment factor		6,8		1,9		3,5	

1) The proceeds for the period were corrected retrospectively (9.6 million francs of administration fees in the telecom services sector were not entered in the books until the 2000 accounting year).

List of Personnel

Management	Name	E-Mail	Telefon
Director	Marc Furrer	Marc.Furrer@bakom.admin.ch	032 327 55 01
Staff Manager	Andreas Sutter	Andreas.Sutter@bakom.admin.ch	032 327 55 03
Communications Manager	Roberto Rivola	Roberto.Rivola@bakom.admin.ch	032 327 55 50

International Relations

Manager and Vice-Director	Frédéric Riehl	Frederic.Riehl@bakom.admin.ch	032 327 54 54
---------------------------	----------------	-------------------------------	---------------

Resources and Organisation

Manager	Arturo Merlo	Arturo.Merlo@bakom.admin.ch	032 327 58 85
Finance and Accounts	Walter Geiser	Walter.Geiser@bakom.admin.ch	032 327 54 55
Personnel	Georg Caprez	Georg.Caprez@bakom.admin.ch	032 327 55 15
Logistics	Peter Lendenmann	Peter.Lendenmann@bakom.admin.ch	032 327 54 56
IT	Bruno Frutiger	Bruno.Frutiger@bakom.admin.ch	032 327 55 11

Radio and Television

Manager and Vice-Director	Martin Dumermuth	Martin.Dumermuth@bakom.admin.ch	032 327 55 45
National and International Media	Peter Marti	Peter.Marti@bakom.admin.ch	032 327 55 44
Local Media and Dissemination	Marcel Regnotto	Marcel.Regnotto@bakom.admin.ch	032 327 55 35
Radio and Television Supervisory Service	Carole Gerber	Carole.Gerber@bakom.admin.ch	032 327 54 49

Telecom Services

Manager and Deputy Director	Peter Fischer	Peter.Fischer@bakom.admin.ch	032 327 55 99
Policy and Planning	Matthias Ramsauer	Matthias.Ramsauer@bakom.admin.ch	032 327 55 10
Fixed Network Services and Universal Service	Armin Blum	Armin.Blum@bakom.admin.ch	032 327 55 79
Mobile and Satellite Radio Services	René Dönni	Rene.Doenni@bakom.admin.ch	032 327 55 43
Numbering and Addressing	François Maurer	Francois.Maurer@bakom.admin.ch	032 327 55 76

Radio Licences and Equipment

Manager and Vice-Director	Véronique Gigon	Veronique.Gigon@bakom.admin.ch	032 327 54 48
Coordination Office	Bernhard Pfander	Bernhard.Pfander@bakom.admin.ch	032 327 54 42
Equipment	Gerhard Käser	Gerhard.Kaeser@bakom.admin.ch	032 327 55 65
Radio Licences	Rudolf Rieder	Rudolf.Rieder@bakom.admin.ch	032 327 58 20
Market and Law, German-speaking Switzerland	Daniel Büttler	Daniel.Buettler@bakom.admin.ch	032 327 54 45
Market and Law, French- and Italian-speaking Switzerland	Patricia Voisard Vollmer	Patricia.Voisard@bakom.admin.ch	032 327 55 91

Frequency Management	Name	E-Mail	Telefon
Manager	Peter Pauli	Peter.Pauli@bakom.admin.ch	032 327 57 00
Radio Principles	Daniel Vergères	Daniel.Vergeres@bakom.admin.ch	032 327 57 20
Frequency Planning	PhilippeHorisberger	Philippe.Horisberger@bakom.admin.ch	032 327 54 11
Frequency Allocation	Konrad Vonlanthen	Konrad.Vonlanthen@bakom.admin.ch	032 327 55 83
Radio Monitoring	vacant		032 327 57 30

Contact

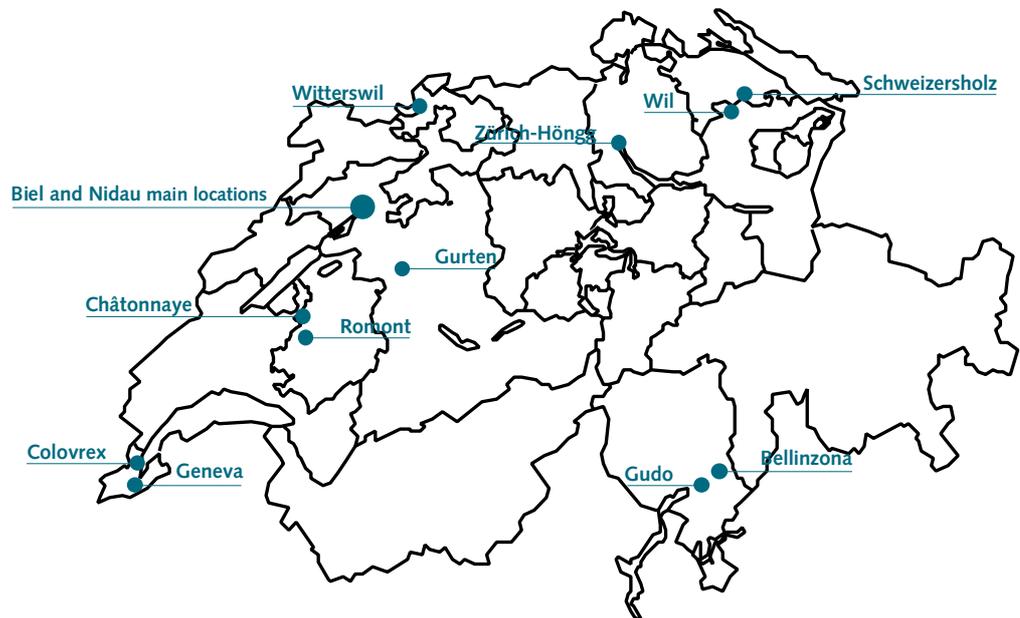
You can reach us by telephone on 032 327 55 11 (switchboard),
or by fax on 032 327 55 55

Please send correspondence to: OFCOM, P.O. box, 2501 Biel-Bienne

www.ofcom.ch

This also features details of how to find us and a map with the two offices: Zukunftstrasse 44 in Biel and Ipsachstrasse 10 in Nidau, plus the branch offices.

http://www.bakom.ch/special/mainbuttons/contacts/index_e.html



OFCOM has support points throughout Switzerland. They enable us to perform our monitoring function in the interest of a telecommunications market which functions effectively. In order to optimise activities in the frequency management sector, the centralisation of certain tasks in Biel is being tested. One branch office respectively in Italian-, French- and German-speaking Switzerland is intended to ensure speedy reactions throughout Switzerland.

Impressum

Circulation

1600 units German, 600 units French, 300 units Italian, 500 units English

Direction

OFCOM, Roberto Rivola, P.O. box, 2501 Biel/Bienne

Coordination

c-matrix group ag, Bahnhofstrasse 11, 6341 Baar

Printing

Victor Hotz AG, Sennweidstrasse 35, 6312 Steinhausen

© Photography

Imagebank, Keystone, Baumann, typoundso

Concept and lay-out

typoundso, Emmenweidstrasse 16, 6020 Emmenbrücke

Copyright

© OFCOM 2000, P.O. box, 2501 Biel/Bienne