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Libera Università
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Guido Carli

CERADI

OBSERVATORY ON INTELLECTUAL PROPERTY COMPETITION
AND TELECOMMUNICATIONS

Italian Telecommunications Law

An overview

A Supplement to IPR-Newsletter

By

GUSTAVO GHIDINI
FRANCESCO GRAZIADEI
GIUSEPPE RIZZO
ENRICA TOCCI

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SECTION A THE TELECOMMUNICATIONS REFORM

1. Former Legislation

As a consequence of both the growing market integration, at national and international level, new European Directives and new laws that other European countries recently adopted, Italy recently passed a new telecommunication Act and a full set of Telecommunications Regulations and ministerial Decrees.

The new Telecommunication Law laid down a complete set of rules for the constitution of a National Regulatory Authority (NRA), which is in full operation.

This step was unanimously considered as a pre-condition for the privatization of Telecom Italia, the former State owned Telecommunication company, resulting from the merger between STET and former Telecom Italia and owning, among others, Telecom Italia Mobile.

Until the recent Telecommunication reform, the telecommunication market had been considered, since the earliest era of telephone service, a natural monopoly .

Furthermore, Television and Telecommunications had always been considered as separate markets submitted to different rules and submitted to different Authorities. As specified below, the new regulatory framework modifies this general approach.

Implementing a complete set of European directives, pursuing the specific goal of the full opening to competition of the tlc market, the recent telecommunication reform eliminates all exclusive rights granted in operating telecommunications system or providing telecommunications services.

In compliance with EU Directives which requested national alternative infrastructure be open to competition (before July 1996), both FS (the Italian Railway company) and Autostrade Spa (the national highways company), as well as ENI (the national oil company) and ENEL (the national electricity company) created companies to run their telecommunications infrastructure, and signed agreements in order to use their facilities to provide telecommunications services.

Most of them, after being granted a license, are already running fixed or mobile telecommunications systems providing fixed and /or mobile telecommunication services (by companies such as Wind as well as BLUTEL, Infostrada etc.).

Furthermore, Law 481/1995 established conditions to create three different Authorities, respectively for Energy, Telecommunications, and Transport. Each of them will be responsible of regulating, controlling and monitoring the market within its own area of competence. The Authorities have also the power to request information and documentation, to ensure that the Law, concessions and service contracts are respected, and to impose fines or the suspension of unlawful and/or unfair activities.

2. The Telecommunication Reform of 1997

2.1. Introduction

The Italian Telecommunications, Reform is mainly based on following Laws, Regulations, Ministerial Decrees and Authority orders.

Law 650/96, passed on December 1996, implementing EU Directives 95/51 (which allows cable tv operators to provide the already liberalized telecommunications services over their networks), 95/62 (on voice telephony regulation) and 96/19 (so called "full competition" which from January 1, 1998 opened to competition the operation of infrastructure to offer any sort of services and the operation of voice telephony - the last telecommunication service remained in the hand of the European monopolists).

Law 189/97, passed on July 1997, implementing Directive 96/2 on mobile telephony and providing for rules and procedures for the third mobile operator's auction;

Law 249, passed July 31, 1997 setting forth the NRA and laying down antitrust rules, as well as rules for the transitory period and general principles specifically related to Telecommunications.

Regulation 318, passed September 19, 1997 implementing Law 650/96 and providing rules for interconnection, universal service, general access conditions (the grant of licenses and authorizations), economic offer conditions, costs accountability, structural and accounting separation, services quality, numbering plan, dialing parity, rights of way and infrastructure sharing, data protection and

communications privacy, settlement procedures, rules specifically related to mobile and personal communications.

Ministerial Decree on numbering, passed February 27, 1998

Ministerial Decree on support mechanism to fund universal service, passed March 10, 1998.

Ministerial Decree on interconnection in the telecommunication sector, passed April 23, 1998.

Ministerial Decree on granting of licenses in telecommunication sector, passed November 25, 1998.

The pro-competitive approach - similar, in many aspects, to the one pursued by the U. S. Telecommunications Act of 1996 and EU Directives - is based on rules allowing all telephony and video service providers the opportunity to operate and provide both television and telecommunications services. This "free for all" attitude is waived in some cases to foster competition and allow newcomers to enter the market: that is the case of handicaps that Telecom Italia had to respect from 1997 since the full break up of the monopoly, abstaining from expanding its services to new markets such as cable tv and programming.

Other pro-competitive provisions are related to the incumbent's duties to cooperate with new competitors in order to promote effective competition; we refer primarily to interconnection provisions. As a matter of fact, access and interconnection will likely become a central issue in the Italian Telecommunications, Media and Information Technology market.

Rules fostering competition are also finalized to the transparency of market operations and procedures. Both rules on competitors' structural or accounting separation and provisions on simplification of procedures necessary to grant licenses or authorizations (a wider use of the latter is intended to be favored) must be interpreted in that perspective.

2.2. The setting up of the Communications Authority

The Italian Reform sets up the Communications Authority (our FCC, so to say). The Authority is composed by the Chairman, the Commission for wires and infrastructures, the Commission for services and products and the Council. Each Commission is a team-organ constituted by the Chairman and four Commissioners. The Council is formed by the Chairman and all the Commissioners. Senate and House of Representatives shall select, by a qualified majority, four commissioners

each, appointed by the President of the Republic. The Authority's President is appointed by the President of the Republic, on proposal of the president of Council of Ministers, in agreement with the Ministry of Telecommunications.

As noted above the new law changes the traditional regulatory approach which considered telecommunications and television as different markets subject to the jurisdiction of different Authorities. This new approach, carried out by the law which give jurisdiction to the new Authority over "communications" as including Telecommunication as well as Television , has been seen as one of the peculiarity of the Italian legislation meeting the needs of converging markets.

The Authority has, among others, the following tasks:

a) the Commission for infrastructures and wires, beyond the functions and powers pointed out in article 2 of Law n. 481/1995, carries out the following duties:

- * it provides opinions to the Minister of Post and Telecommunications on the frequencies distribution plan, in accordance with Article 3 of Law 223/1990;

- * it works out and approves the frequency plan.-

- * it defines the Communications Authority's measures, and promotes the intervention of the Ministry of Post and Telecommunications;

- * upon the Ministry of Post and Telecommunications' advice, and complying with EU Directives, it determines decoders' standards in order to foster the use of services;

- * it holds the register of communications operators;

- * it defines objective and transparent criteria, even referring to tariffs, for interconnection and access to telecommunications infrastructures, on a non-discriminatory basis;

- * it promotes the relation between telecommunications operators and consumers, and verifies that operators will not unfairly refuse to service providers access to infrastructures.

- * it settles, with a special procedure, disputes on interconnection and access to telecommunications infrastructures;

- * it defines universal service, and the criteria for determining and sharing the pertinent costs,

- * it promotes international interconnection of national infrastructures;

- * it determines criteria for national numbering plans related to telecommunications infrastructures and services, on objective, transparent and non discriminatory basis;

b) the Commission for services and products

- * watches over service providers' compliance with the law;
- * watches over the distribution of services and products, advertisements included
- * determines, complying with EU directives, the minimum period from the date of edition of each work, that has to pass before transmitting audiovisual works;
- * as regards advertisements, enacts rules enforcing the law;
- * checks the effective existence of dominant positions and adopts the subsequent provisions;
- * informs the Antitrust Authority about the existence of possible violations of antitrust law (Law 287/1990) committed by communications operators;

2.3. *Licensing*

Law [249/97], Regulation [318/97] and Ministerial Decree November 25, 1998 set forth provisions ruling the operation of telecommunications infrastructures and the provision of telecommunication services.

Beginning from January 1, 1998 the setting up of a cable or broadcast public telecommunications network on an non exclusive basis depend on the grant of a license. At the same date, the building of land stations for satellite services and the operation of telecommunications infrastructures depend on the grant of an authorization.

The difference between a license and an authorization consist in this, that a license shall be granted on an individual basis whereas an authorization will be granted if the operator meet some general conditions provided by the regulations and ask to the Authority to certify that he is in the position to operate his infrastructure or provide his services. In case the Authority doesn't express any statement within a short period of time after receiving the above mentioned request by the tlc operator, the authorization is deemed to be granted.

A license is also requested, in general, for those services not expressly mentioned as requesting an authorization, those which need the use of scarce resources and those subject to specific obligations.

A license is always requested for the following services:

- to provide voice telephony services
- to build and operate public networks

- for mobile communication provision
- to assign frequency or numbering resources
- for operators who provide universal service
- for operators subject to specific duty because of their relevant market power

To build and operate a network to provide voice telephony service an operator will need only the grant of one license.

Cable national and local licenses shall be granted by the Authority as well as license for the provision of services when requested.

Local Authorities have the power to grant "concessions" (permission to use public goods or to exercise State rights) for the (possible) use of public soil, and to determine possible cable operators' civic duties .

Licenses and authorizations' grants will depend on the following conditions:

- a) the applicant must be a company (even co-operative) with a fully paid-up capital of not less than 10% of the investment's value.
- b) companies must be Italian or belong to a EU member State. Control of the company by persons or companies not belonging to European Union is allowed with reference to States applying effective reciprocity, obligations coming from international agreements (i.e. WTO Agreements) excepted.
- c) Technical and quality standards fixed by the Authority must be fully met.

Telecommunications licenses and authorizations are for a valuable consideration, and shall be granted for a period of 15 years.

2.4. Structural and accounting separation

The new legislative framework lays down several provision concerning structural and non structural safeguards against cross subsidies and discrimination practices by the tlc operators.

Beginning from January 1, 1998, Telecom Italia and other companies with a relevant market share building or running networks and providing telecommunications services must keep separate accounts of activities related respectively to the network building and operation, services provision, and interconnection provision.

Furthermore, companies with a relevant market share providing universal service must keep separate accounts of the activities related to universal service

meeting some specific accounting requirements. Accounts must be certified by auditors enrolled in a register held by CONSOB (equivalent to U. S. S.E. C.).

According to Law 249/97, as specified by Regulation 318/97, public utilities companies (even if holding exclusive rights in other markets) which run their telecommunication networks to provide telecommunication services or to offer transmission capacity to third parties must keep accounting separation between telecommunications and other activities in different markets.

Equipment available for Television services can also be used for the distribution of Telecommunications services. If that happens, licensees must keep separate accounts of broadcast and telecommunications activity; national broadcast licensees must also set up separate companies (so called structural separation) for operating the equipment.

A cross ownership ban between Telecom Italia and the public utilities companies which provide also telecommunication services is set up in Law 249.

2.5. Interconnection

Interconnection is the cornerstone of competition in telecommunications. As a matter of fact, the physical linking of networks for the mutual exchange of traffic is a pre-condition for the development of local, national and international competition in Telecommunications.

Because of its importance, interconnection has been one of the most debated issues in the Italian Telecommunications Reform, which focuses on the following points: different categories of interconnections duties, interconnection costs, pricing and reciprocal compensation, interconnection conditions' transparency - access to unbundled network elements; interconnection agreements and settlement of disputes, consumer friendly interconnection.

Law [249/97], Regulation [318 /97] and Ministerial Decree [passed April 23, 1998] impose to the Telecommunications operators a duty to interconnect to all telecommunications infrastructures. A special provision is established for mobile and personal communications operators, who can access to a "necessary number of interconnection points", if there are no real technical and commercial alternatives and the interconnection does not meet the conditions requested .

All telecommunications operators are obliged to provide interconnection. Special duties are imposed to operators having relevant market power for interconnection services at national level, who must not discriminate among

competitors and apply the same conditions and quality standard to all of them. They must also apply cost oriented rates and negotiate interconnection contracts within 45 days. Furthermore, the Law requires *new comers* operating public utilities' infrastructures to make available to their competitors, on a non discriminatory basis, the conditions for interconnection they use internally.

As far as interconnection costs are concerned, the Italian Reform applies the principle of Long Run Incremental Costs, plus a reasonable remuneration of part of the capital invested by the incumbent.

The troubles in allocating costs with regard to interconnection services has led the European Union, and consequently the Italian regulation (DM April 23, 1998), to chose the criterion of "best practice". Giving the current level of interconnection rates in the European union countries, the Commission has established that a cost oriented rate is that located into a range of values corresponding to the best European practice defined as the average of the three "cheapest" European telecommunication operators. As a consequence of this approach, any operator who claims for higher rates has to prove that the rate claimed is effectively cost oriented.

After a long discussion over the theme with Telecom Italia, the Authority has recently further emended the technical and economic conditions for interconnection by Telecom Italia.

Another question which must be addressed is related to interconnection conditions' transparency. The Italian Reform mandated Telecom Italia and (possible) other operators enjoying a relevant market power to publish immediately all the interconnection conditions. It also sets forth detailed rules for unbundling network elements, in order to avoid that operators or consumers be obliged to buy an excessive transmission capacity or services they do not need.

As regards the role the Authority plays in settling interconnection disputes, the Italian Reform, implementing EU Directives, provides that the Authority may intervene at any time in an interconnection agreement, and that it must do so if requested by one of the parties. Against the Authority's public decisions, interested parties may appeal to the competent Courts. The Authority must settle the dispute within six months.

Regulation 318, as well as DM February 27, 1998, provide rules to grant the carrier selection and carrier preselection and number portability (which shall be granted before January 1 2001).

Furthermore the Authority must grant an effective competition in the numbering plans and proceedings for the assignment of numbers for public services

to the public and shall put special attention in granting transparent, objective fair and non discriminatory conditions for the use of code numbers for the provision of public interest services, such as directory assistance.

On their side all telecommunication operators assignee of a portion of numbering resource must not discriminate in the sequence of numbers utilized to provide access to the services of competitors.

Other rules, better known as "consumer friendly interconnection", are related to number portability and dial parity. As for the numbering plan, it should be provided as soon as possible, and anyhow not after January, 1999, while dial parity must be guaranteed as far as possible before January 2001, and in any case before January 2003.

2.6. Universal service

As other recent Telecommunications Laws, the Italian Reform lays down a new role for universal service, the provision of basic service at affordable rates, which is supposed to change radically from a monopoly regime to competition. The following key points have been dealt by the Italian Reform: definition and content of universal service; obligation to provide and to fund it.

The Italian Reform's definition of the universal service includes basic voice telephony service, directory inquiry services, yellow pages and public phones, as well as services related to national public interests, such as public security, public defense, justice, education and government. The Authority is requested to give a more detailed definition of universal service, and to modify it according to the evolution of the market.

Until January, 1998, Telecom Italia was the only operator authorized to provide universal service in Italy. Beginning from that date, all operators whith the requested requisites can provide such service at local or national level.

Universal service will be financed by a special Fund contributed to by telecommunications operators (those running public telecommunications networks, providing voice telephony services - proportionally to their use of network - and mobile telecommunications operators) on proportionate, objective and non discriminatory basis. The Fund is set up to finance the universal service net costs, that is the difference between the costs of providing services and the revenues generated from the line.

2.7. Rights of way and infrastructure sharing

The Italian Reform provides for equal collocation and for the sharing of rights of way, which can be implemented by the Communications Authority and local authorities. As a matter of fact, dominant operators are required to make available to their competitors their infrastructures when duplication is not possible or is not permitted by the above mentioned authorities.

2.8. Data protection and privacy rules

The Italian Law also refers to Data and Privacy Protection Law, where applicable.

2.9. Sanctions

Administrative sanction, from fines to license revocation, are laid down by the Telecommunications Reform.

2.10. Mobile and personal communications

As the penetration rate of mobile services is rising in Italy up to 40% of the population it is easy to understand the great attention put into regulating this market by the Authorities who hold jurisdiction on mobile communications.

For this reason specific rules are set vis-à-vis mobile and personal communications licenses

Implementing Ue directive 96/2, the law n. 189, passed July 1, 1997 has eliminated any exclusive rights in order - to provide mobile - telecommunications infrastructures and services and - to -use infrastructure of a third party to provide such services.

The law is implemented by the above mentioned Regulation 318/97.

The law also empowered the Ministry of Communications to assign new frequencies available for new digital mobile communication services (so called DSC 1800), in part to the two incumbents GSM mobile providers and in part to a new comer chosen by an auction: that was WIND, owned by ENEL, DT and FT..

The law also provided for a Committee of Ministers to lay down rules to guarantee and foster competition in the mobile market.

The so appointed Committee of Ministers passed a Decree (April 4, 1998) stating that the new comer (the third mobile provider) had the right to obtain *roaming* on a national basis and infrastructure and site sharing applying cost oriented rates.

A Decree passed on April 1, 1998 stated that the auction to be held for new mobile operators (the auction as we know, had already granted a new mobile license to a third operator) was for only one license.

According to the Decree, the Authority has considered if that the new frequencies available could permit the grant of a fourth mobile license.

The enter of a fourth operator (BLUTEL) in this market has created conditions for an effective concurrence development. The Decision of the Authority, 9 June 1999, states some asymmetrical measures in favor of the fourth operator, to permit it an easy enter in the market:

1. it has no obligations of territory coverage;
2. it has the right to have a cost-oriented national roaming with the other operators;
3. it has the right to a cost-oriented common use of other operators sites and infrastructures, until 2005.

Actually TIM and Omnitel (OPI) have been notified by the Authority as *significant market power* operators (Decision n. 197/99, 7 September 1999) in the mobile market and in the interconnection market ⁽¹⁾

They have thus following obligations:

- to guarantee a *special access* (an access in different points of the network);

(1) *Significant market power* is a concept very different from the *dominant position* used in general competition law. Significant market power is an ONP concept used to decide when an organisation should be subject to specific obligations, under specific ONP directives. An organisation is presumed to have significant market power if it has more than 25% of the relevant market. Typically, organisations need to have a much greater market share than this before they are considered as having a dominant position on a market. The major differences concern the way the relevant market is defined and the extent of an organisations influence on that market. In general competition law the relevant market is defined on a case-by-case approach basis in terms of the product/service in question and the relevant geographical area. In the ONP directives, instead, the relevant market must be assessed on the basis of the markets identified in the specific directives.

- non discrimination and transparency in the interconnection economical conditions;
- cost orientation in defining interconnection economical conditions;
- to adopt a detailed cost accounting system.

In 1st October 1999 the Antitrust Authority - as a consequence of an arraignment initiated on May 7th 1999 - has contested to OPI and TIM to have conducted three unlawful agreements, breaking the Antitrust Law:

- the first concerning restrictive trade practice, in fixing the same prices for Fixed-Mobile calls, during the 1998 year.
- the second, concerning the January 1999 agreement between Tim and OPI in economic conditions revision for Fixed - Mobile calls;
- the third, concerning restrictive trade practice, in economic conditions revision of interconnection between Tim and OPI on July 1998, while the third mobile operator (WIND) was entering in the market, thus causing a damage to this operator and new entrants on the fixed market.

3. Conclusions

After this reform the Italian telecommunication market seems to be, among the European ones, one of the most opened to competition, domestic and foreign.

Indeed many foreign companies have already entered or are considering to enter our market.

We will just mention the case of operators who choose to enter the market only with their own forces, such as Mannesman, who now controls the mobile provider Omnitel as well as the fixed telephony provider Infostrada.

As will be shown in section C, in many cases foreign operators have entered the market by joint ventures with an Italian ally. This is the case of Deutsche Telecom (even if its presence in the joint venture with ENEL has been now jeopardized by its attempt to enter into an agreement with Telecom Italia) as well as France Telecom, which created a full operating joint venture with ENEL (the Italian public electricity company) called Wind, which won the auction for the third mobile operator. But is the case also of British Telecommunications which entered a joint venture (Albacom) with Italian operators such as Banca Nazionale del Lavoro.

SECTION B: ACTIVITIES

An individual license shall be requested for:

- a. voice telephony provision;
- b. installation and provision of public telecommunications networks (infrastructures);
- c. mobile and personal communications services provision;
- d. radio frequency allotment or specific numbering for the offer of services other than the ones stated in items a), b) and c).

According to art. 2, par. 3, D.M. 25 novembre 1997 (hereinafter *decreto licenze*) only one license is requested both for installing a tlc network and providing voice telephony. In this case the applicant shall implement the application with the information provided for by the annex A and B of *decreto licenze*.

An individual license is requested for the use of infrastructures already installed by the holders of private authorizations for public services provision (art. 2, par. 5 *decreto licenze*).

The provision of telecommunications services other than voice telephony, mobile telephony and the installation and provision of public telecommunications networks, including networks involving the use of radio frequencies, may only be subjected to a **general authorization** according to the conditions and criteria listed in Exhibit F of DPR 318/97.

1. Voice telephony provision and mobile and personal communications services

Prerequisites of the applicant

The applicants shall be based either in the national territory or in an EES or WTO country. Nevertheless, according to art. 2359 of the civil code, the control of the company is allowed to applicants who are members of an extra European

country provided that a reciprocate regime applies towards Italy, with the exceptions laid down in international agreements.

Furthermore the applicant shall establish a joint stock company, even in co-operative form, with corporate capital fully paid in at the filing of the application in an amount not less, losses net, than 10% of the value of investments to be effected.

Procedure and contents of the request

The applicant shall submit to the Authority a request for the individual license supported by the information requested for by annex B of *decreto licenze*.

Particularly, the application for the individual license for the installation and provision of telecommunications networks open to public shall include the following information referred to:

The applicant:

- a. name, legal status, legal address;
- b. subscribed and paid-up capital;
- c. shareholders' composition;
- d. budget of the last 2 operational year either for the newly established company or for shareholders' budget;
- e. other kind of partnership, if any;
- f. number and types of individual licenses already granted in other countries and market and customers served up.

The service:

- a. service description;
- b. geographic and population coverage;
- c. activity program schedule;
- d. network, equipment, frequencies and numbering relevant to service provision;
- e. interconnections.

The market of interest:

- a. established objectives;

b. market survey;

The program feasibility:

- a. technical expertise;
- b. participation in research and training program in the telecommunications sector as well as in standardization bodies;
- c. investment program;
- d. employment program;
- e. research and development investment program.

The commitment:

- a. to comply with obligations as of art.4 of *decreto licenze*;
- b. to increase capital if and when scheduled;

Documents proving the payment made up for the license procedure or a declaration of payment if the payment is subsequent to the date of the application.

The following documents shall be supplied by the applicant requesting the individual license:

- a. an authenticated deed concerning the establishment of a joint stock company with corporate capital fully paid in at the filing of the application in an amount not less, losses net, than 10% of the value of investments to be effected;
- b. a declaration by the applicants who are obliged to provide anti-mafia certificates according to legislative decree of 8 August 1994 n.490, replacing the notary deed as of Annex F of *decreto licenze*;
- c. a nationality certificate of the company;
- d. a certificate of discharge testifying either that the company's directors have not been pleaded guilty and sentenced to imprisonment for more than six months or are subject to precautionary measures;
- e. a certificate testifying that the contribution due for issuing the license had been paid in accordance with art.6, par.20 of the regulation or a declaration of payment if the payment is subsequent to the date of the application.
- f. an official declaration by the Ministry or the Body responsible for the control of the sector, in compliance with art.2, par.2, item e) of DPR 318/97, or by the holders of authorizations to provide services of public utility, confirming that the public interests are safeguarded. This declaration shall confirm that the use of

infrastructures already installed shall fulfill the institutional finality and in particular, the functions connected with safety of both men and installations of telecommunications infrastructures. Documents shall list in details the offer of networks infrastructures for public use. Also the holders of authorizations for providing services of public interest shall submit to the Ministry or to the Body responsible for the control of the sector a technical report where reference is made to the individual license requested by the applicant established in compliance with art.4, pars 6 and 7 of the law n.249 of 1997.

The Authority shall inform the applicant of the procedure being started, within ten days from receiving the application.

Furthermore the Authority shall set reasonable time limits to inform the applicant of its decisions as soon as possible but no more than six weeks after receipt of the application. This time limit may be extended up to 4 months in objectively justified cases. In the case of comparative bidding procedures, the time period may be extended up to 8 months

Where the application shall lack of some of the information provided for by *decreto licenze* the Authority, within two weeks on receiving the application, shall inform the applicant of the missing information which shall be integrated within fifteen working days from receiving the request.

The Authority shall grant the license within six weeks after receiving the application's integration. Where the integration is not provided, the Authority shall immediately inform the applicant on the application being run out.

The holder, shall inform the Authority about any changes occurred after obtaining the individual license within thirty days. The Authority might ask the holder to present a new application in thirty days.

The offer of service shall not start before the individual license has been granted.

The holder of individual license has no exclusive right on the service offered.

The validity of the individual license shall no exceed fifteen years and shall be defined by the relevant contract, it might be renewable and be transferred to third party only on the Authority's consent according to art.6, par. 28 of Decreto.

The Company to whom the license is granted shall deliver a bank guaranty for the obligations set out in the decree.

The amounts as of Annex G of *decreto licenze*, might be reduced according to terms and conditions stated in the same Annex when the objectives are met, provided others provisions are given for individual license granted by auction.

2. Infrastructures

Prerequisites of the applicant

The applicants shall be based either in the national territory or in an EES or WTO country. Nevertheless, according to art. 2359 of the civil code, the control of the company is allowed to applicants who are members of an extra European country provided that a reciprocate regime applies towards Italy, with the exceptions laid down in international agreements.

Furthermore the applicant shall establish a joint stock company, even in co-operative form, with corporate capital fully paid in at the filing of the application in an amount not less, (net of losses), than 10% of the value of investments to be executed.

Procedure and contents of the request

The applicant shall submit to the Authority a request for the individual license supported by information provided for by annex A of *decreto licenze*.

Particularly, the application for the individual license for the installation and provision of telecommunications networks open to public shall include the following information referred to:

1. *The applicant:*

- a. name, legal status, legal address;
- b. subscribed and paid-up capital;
- c. shareholders' composition;
- d. budget of the last 2 operational year either for a newly established company or for shareholders' company;
- e. other kind of partnership or alliances, if any;

- f. number and types of individual licenses already granted in other countries and market and customers served up.

2. The Network:

- a. network composition;
- b. geographic coverage;
- c. installation program;
- d. description of service provision;
- e. equipment used and relevant technical standards;
- f. frequencies and numbering requested;
- g. interconnection with other networks;

3. Market of interest:

- a. established objectives;
- b. market survey;

4. Program feasibility:

- a. technical expertise;
- b. participation in research and training program in the telecommunications sector as well as in standardization bodies;
- c. investment program;
- d. employment program;
- e. research and development investment program.

5. The Commitment:

- a. to comply with obligations as of art. 4 of the decree;
- b. to increase capital, when scheduled;

- 6. Documents proving the payment made for the license procedure or a declaration of payment if the payment is subsequent to the date of the application. Where the application concerns infrastructures already installed by private license holders for the provision of public utility service as of art.2, par.5 *decreto licenze*, only points 1,2 and 5 (item b) excluded) and 6 apply.

The following documents shall be supplied by the applicant requesting the individual license:

- g. an authenticated deed concerning the establishment of a joint stock company with corporate capital fully paid in at the filing of the application in an amount not less, losses net, than 10% of the value of investments to be effected;
- h. a declaration by the applicants who are obliged to provide anti-mafia certificates according to legislative decree of 8 August 1994 n.490, replacing the notary deed as of Annex F of *decreto licenze*;
- i. a nationality certificate of the company;
- j. a certificate of discharge testifying either that the company's directors have not been played guilty and sentenced to imprisonment for more than six months or are subject to precautionary measures;
- k. a certificate testifying that the contribution due for issuing the license had been paid in accordance with art.6, par.20 of the regulation or a declaration of payment if the payment is subsequent to the date of the application.
- l. an official declaration by the Ministry or the Body responsible for the control of the sector, in compliance with art.2, par.2, item e) of the regulation, or by the holders of authorizations to provide services of public utility, confirming that the public interests are safeguarded. This declaration shall confirm that the use of infrastructures already installed shall fulfill the institutional finality and in particular, the functions connected with safety of both men and installations of telecommunications infrastructures. Documents shall list in details the offer of networks infrastructures for public use. Also the holders of authorizations to provide services of public utility shall submit to the Ministry or to the Body responsible for the control of the sector a technical report where reference is made to the individual license requested by the applicant established in compliance with art.4, pars 6 and 7 of the law n.249 of 1997.

The Authority shall inform the applicant of the procedure being started, within ten days from receiving the application.

Furthermore the Authority shall set reasonable time limits to inform the applicant of its decisions as soon as possible but no more than six weeks after receipt of the application. This time limit may be extended up to 4 months in objectively justified cases. In the case of comparative bidding procedures, the time period may be extended up to 8 months

Where the application shall lack of some of the information provided for by *decreto licenze* the Authority, within two weeks on receiving the application, shall

inform the applicant of the missing information which shall be integrated within fifteen working days from receiving the request.

The Authority shall grant the license, within six weeks on receiving the application integration. Where the integration is not provided, the Authority shall immediately inform the applicant on the application being run out.

The holder shall inform the Authority about any changes occurred after obtaining the individual license within thirty days. The Authority might ask the holder to present a new application in thirty days.

The offer of service shall not start before the individual license has been granted.

The holder of individual license has no exclusive right on the service offered.

The validity of the individual license shall no exceed fifteen years and shall be defined by the relevant contract, it might be renewable and be transferred to third party only on the Authority's consent according to art.6, par. 28 of the Decreto.

The Company to whom the license is granted shall deliver a bank guaranty as for the obligations set out in the decree.

The amount as of Annex G of *decreto licenze*, might be reduced according to terms and conditions stated in the same Annex when the objectives are met, provided others provisions are given for individual license granted by auction.

3. Reselling

Prerequisites of the applicant

The applicants shall be based either in the national territory or in an EES or WTO country. Nevertheless, according to art. 2359 of the civil code, the control of the company is allowed to applicants who are members of an extra European country provided that a reciprocate regime applies towards Italy, with the exceptions laid down in international agreements.

Furthermore the applicant shall establish a joint stock company, even in co-operative form, with corporate capital fully paid in at the filing of the application in an amount not less, losses net, than 10% of the value of investments to be effected

Procedure and contents of the request

An individual license is requested for the use of infrastructures already installed by the holders of private authorizations for public services provision.

The applicant shall submit to the Authority a request for the individual license supported by the information provided for by annex A of *decreto licenze*.

4. Value added services

Prerequisites of the applicant

The **general authorizations** may be granted to individuals or entities of (i) the European Union member states, or (ii) WTO or (iii) other countries which have reciprocity agreements with Italy in the telecommunication sector.

Procedure and contents of the request

The provision of telecommunications services other than voice telephony, mobile telephony and the installation and provision of public telecommunications networks, including networks involving the use of radio frequencies, may only be subject to the **general authorization** according to the conditions and criteria listed in Exhibit F of DPR 318/97.

Before providing telecommunications services, the undertaking, which believes it complies with the conditions of a general authorization, shall notify the TLC Authority of its intention to do so and shall provide the TLC Authority with the necessary information about the services in a declaration aimed to ensure compliance with the applicable conditions. In the event that the TLC Authority does not communicate to the interested party a negative decision within 4 four weeks from the receipt of the declaration, the authorization is deemed as granted pursuant to Article 20 of Law n. 241 of 2 August 1990 (law on the transparency of the public activities), on the basis of the implied consent principle.

If at the time of filing the declaration, or thereafter, the interested party does not comply with the conditions applied by the general authorization, the TLC Authority shall inform the undertaking that is not entitled to avail itself of the

general authorization and impose on that undertaking, in a proportionate manner, specific measures aimed to ensure the compliance with the conditions. The undertaking shall remedy any irregularities within one month from the intervention of the TLC Authority, by also stating its view on the application of the conditions. If the undertaking timely remedies the irregularities, the TLC Authority, within two months from its initial intervention, finalizes its decisions. If the undertaking does not remedy the breaches, the TLC Authority, within two months from its initial intervention, confirms its decision and states the reason of its decision. The decision shall be communicated to the undertaking concerned within one week from its adoption.

5. Directory assistance

The wide availability of advanced electronic tools and the widespread diffusion of the Internet, allows telecommunications' operators to offer different kinds of services of directory assistance.

Now users can consult these data banks either off line (magnetic disks, CD ROM) or on line, without having necessarily recourse to paper directories. It is a very useful opportunity since all the information that these services provide may be "imported" in the records of address and phone book software and so used for computer applications (such as, for example, routing phone calls by computer).

Factual and legislative framework

At the moment Telecom is the only provider of tlc services that has a virtually complete public telecommunications network (especially with reference to last mile). The subscription to Telecom is thus an unavoidable step for the user who wants to have access to the most common tlc services (even if he decides, after the subscription, to route the whole traffic by another carrier). For these reasons Telecom has the subscriber's directory complete and up to date day by day.

The Presidential Decree n.156 of 29 march 1973 granted to Telecom the exclusive right to publish (in any form), to sell and to distribute subscribers' directories. SEAT is the contractor company, on behalf of Telecom, for the realization of local and national directories.

This pattern has become contrary to EU law, since art. 4-ter of the Directive n. 90/388 of 28 June 1990 (modified by Directives n. 94/46, n. 95/51, n. 96/2, n. 96/19) about competition in telecommunication services markets provides for the abolition of exclusive rights granted by the Member States to undertakings providing directory assistance services.

Furthermore the exclusive rights granted by Presidential Decree n. 156 to Telecom are as well contrary to EU Treaty (implemented in Italy with law n. 1203 of 14 October 1957 and immediately enforceable) since art. 90 provides that Member States are not allowed to keep "alive" measures contrary to artt. 7, 85, 86, 87, 89, 90 of the Treaty itself in favor of public undertakers or undertakers which have exclusive or special rights.

The Directive n. 388/90 has been implemented by the Presidential Decree n. 318 of 19 September 1997 which provides for the repealing of "exclusive rights for the establishment and provision of directory inquiry services as well as the publication of directories" (art. 2, par. 2, lett. b).

Thus, in consideration of said legislative scenario, the market of directory assistance services in Italy is, at the moment, open to the competition of several undertakers.

The undertaker that decides to provide these kind of services cannot be sued by Telecom or SEAT either for illicit appropriation of Telecom's exclusive informations or for unfair competition (as it is well explained in *Ordinanza del Tribunale di Torino* of 17 July 1997).

Current market situation in Italy

At the moment, besides SEAT, there are in Italy a certain number of directory assistance services providers that seem to have chosen the Internet as their preferential business range.

It is necessary to underline that in compliance with EU Directive 98/10 universal service obligations include the provision of paper or electronic directory services within the local network to every subscriber and of an information service that comprises all the telephone numbers in directory.

Furthermore art. 17 of Presidential Decree n. 318/97 provides that the TLC Authority shall ensure that directories of subscribers to voice telephony service are made available to users within their local network, free of charge, in either printed or electronic form, and updated on a regular basis.

Since the directory assistance service within the local network is already provided from the tlc undertaker without any charge for the subscriber it seems that there is no more room for the provision of a similar service by other categories of undertakers.

In consideration of what it has been said before, desirable business areas seems to be:

- a) the provision of directory assistance service outside the local network.
- b) the provision, in competition with Telecom (176 service), of a directory assistance service on international scale. At the moment the cost of the service provided by Telecom is about Lit. 900.
- c) the provision of a directory assistance service on line, with ancillary services (e commerce, home banking, auctions on line, chat lines, e mail) excepted the phone call routing by internet, because, in this case, it would rise the question whether the undertaker is a voice telephony provider or not. In the case of an affirmative answer the provider would need an individual license.

The updating of information is another problem that a directory assistance service provider has to face.

An undertaker that decides to provide a nation-wide directory assistance service can use Telecom's information. In this case art. 17, par. 2 of Presidential Decree n. 318/97 applies, providing that each telecommunications organization shall make available to other organizations on fair and non discriminatory conditions its subscribers' directories in order to allow the realization of general directories. In this way the directory assistance provider has access to Telecom's information (complete and always up to date).

In the case of an international directory assistance services, the sources should be necessarily different.

In general terms the updating of the directories could be managed offering the service on line and using methods of self updating by the subscribers themselves, via Internet.

6. The third generation mobile networks system in Italy: UMTS

UMTS, the Universal Mobile Telecommunications System, is recognized as the main opportunity to provide broadband mobile multimedia services for the

future mass market. There is an increasing focus on packet switching and Internet protocol techniques offering higher capacity and efficiency.

Studies about UMTS are actually carried on by CEPT (European Conference of Postal and Telecommunications Administrations), that in its decisions has destined to UMTS applications the frequency bands 1900-1980 MHz, 2010-2025 MHz and 2110-2170 MHz (totally 155 MHz), and to the UMTS satellite applications the frequency bands 1980-2010 MHz and 2170-2200 MHz (totally 60 MHz).

Italian regulatory framework to apply to UMTS, is constituted by DPR 318/97, about the grant of an individual license and obligations, and by DM 25 November 1997, about the criteria the Authority can adopt on licitation.

But there are many questions that have to be regulated.

The Ministry of Communications has started a public consultation aimed to:

- to inform the perspective telecommunications and information technology market players on the new 3G mobile communication system potentiality, i.e. UMTS, as well as on the available frequencies, the state of art of standardization and the current international, Community and Italian regulation systems;
- to submit to the forthcoming interested parties some problems of regulation and procedural nature in order to progressively introduce in Italy the 3G mobile communications systems;
- to collect opinions and suggestions of both the operators, the manufacturers and users on the role that the 3G mobile communications systems would play in the Italian telecommunications market.

The questions to be discussed are:

- license number and validity: how many licenses should be granted; how long should they be valid?
- national and regional licenses: is it useful to release both national and regional licenses? Licenses allocation conditions: is it better a "beauty contest" or an auction procedure?; is it necessary a preliminary qualification? Which criteria should be considered to grant a license?
- Networks operators, service providers and content providers: which role will they play in the 3rd generation systems market?
- market conditions: should new entrants have initial, permanent or temporary facilitation? If so, which ones?

APPENDIX

The present players and market trends

N.B. For a list of the telecommunications operators who hold a license for fixed and mobile telecommunications, see the list published by the Communication Authority (translated) reported below (II).

I

The following scheme provides an essential picture of some of the main tlc and tv players in the Italian communication market.

Telecom, TIM. Telecom Italia is the ex monopolist in telecommunication infrastructures and services and is now still the dominant operator in tlc networks (it is the only local loop provider) and in fixed telephony. It is also the first mobile communication provider through the subsidiary Telecom Italia Mobile. TI also own 35% of Stream, the second digital cable and satellite platform for pay television. 18% of Stream is owned by Cecchi Gori Group which controls two nationwide analog terrestrial broadcasters, TMC e TMC2.

After Olivetti gained recently the control of Telecom Italia the new management intend to put the control of TIM in Tecnost (another company of the group) which (if this plan will be confirmed) will hold the 60% of TIM while holding the 52% of TI, that will concentrate in its traditional core business of fixed telephony. Olivetti will hold the 41 - 43% of Tecnost.

Infostrada, Omnitel The two company, formerly subject to the joint control of Olivetti and Mannesman, have recently fallen under control of the latter (Infostrada at 100%; Omnitel at 51%, the other partner being Bell Atlantic). Infostrada holds a license for the setting up of a tlc network to provide fixed telephony and is already operating as a long distance carrier, while Omnitel is the second mobile communication operator.

Wind The company is owned by Italian ENEL (51%), the former monopolistic electricity public utility, Deutsche Telekom (24,5%) and France Télécom (24,5%). It sets up and provides public telecommunication network as well as fixed and mobile telephony.

Furthermore, ENEL recently entered in Telepiù with a 30% share. Telepiù is the first satellite digital pay tv operator in Italy. RAI, the State owned public service broadcaster, holds a 10% in Telepiù and provides Telepiù with six pay tv channels.

Abacom - Blutel. Albacom is a company owned by British Telecommunications (BT) Mediaset, Banca Nazionale del Lavoro (BNL) Italgas, and provides fixed telephony.

Blutel is owned by Autostrade (32%), Italgas (7%), BT (20%), BNL (7%) Benetton (9%) Distacom (9%) and Caltagirone (7%). The company won (July 1999) the auction for the fourth mobile operator.

AEM - ACEA. AEM (Azienda Elettrica Milanese) is the public utility providing electricity in the area of Milan. It recently entered a joint venture with Mr. Silvio Scaglia the former Managing Director of Omnitel to provide telecommunication services.

On its side, ACEA (the public utility providing electricity in the area of Rome) is entering a joint venture with Telefonica de España (which, according to the party's intentions will hold the 49% of SMT, now 100% owned by ACEA. SMT already holds a license to set up and provide a public tlc network in the area of Rome. SMT will provide water, electricity and telecommunication services in the area of Rome, first to the businesses and then to residential customers.

About the joint venture between DT, FT and the Italian ENEL, it can be said that the presence of DT in the capital of Wind seem to be rather precarious. After the attempt of DT to enter in a joint venture with the competitor Telecom Italia, it seems obvious to forecast that in a near future DT will have to leave the WIND joint venture (managers and employers as well as the two DT representatives in the Board have been already "kicked out" by ENEL) so that a new company will take place of DT.

* * *

The picture thus outlined shows that most of the mentioned joint ventures involve providers of the so called alternative infrastructure (owned by a Public Utility Operator). Those companies were in the past banned to use their telecommunications infrastructures to provide the services to the public.

Furthermore the cross ownership between different operators shows that two main trends can be seen in the communications market. Except for Telecom Italia, the first is an integration between fixed and mobile telecommunications. The second is an integration between telecommunication operators, broadcaster and providers of cable or satellite digital television.

A third trend, which has yet to be tested by the market, may also be envisaged: the integration between different public services (so called: *multiutility*, where the same company can provide end users with water, as well as electricity and/or telecommunication services).

II

Fixed telecommunication operators

Company	Typology of license	Date of issue
Infostrada S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	18/02/1998
Wind Telecomunicazioni S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	18/02/1998
Colt Telecom S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Milano	09/03/1998
Albacom S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	06/04/1998
MCI Worldcom S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Milano	21/04/1998
MCI Worldcom S.p.A.	License to provide voice telephony service	21/04/1998 e 01/03/1999
Tiscali S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	22/04/1998 e 01/03/1999
Wind Telecomunicazioni S.p.A.	License for the setting up and provision of a public telecommunication network on a national basis	22/04/1998
Citytel S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	27/04/1998
Colt Telecom S.p.A.	License to provide voice telephony service	26/05/1998 e 28/04/1999
Nuova Società di Telecomunicazioni	License for the setting up and provision of a public telecommunication network on a national basis	12/06/1998 e 20/04/1999
Autostrade Telecomunicazioni S.p.A.	License for the setting up and provision of a public telecommunication network on a national basis	16/06/1998
Teleglobe Italia S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Milano, Palermo and Trapani	10/07/1998
Teleglobe Italia S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	10/07/1998 e 28/04/1999
Global One Communications S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	10/07/1998 e 28/04/1999
Skipper Telecom (ora Interoute S.p.A.)	License for the setting up of a telecommunication network to provide voice telephony service	10/07/1998
RSL COM S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	28/07/1998
Hermes Europe Railtel B.V.	License for the setting up and provision of a public telecommunication network in the area of Milano	13/08/1998

Telecom Plus International S.r.L.	License to provide voice telephony service	18/08/1998 e 28/04/1999
Unisource Carrier Services A.G.	License for the setting up and provision of a public telecommunication network in the area of Milano, Torino and Roma	18/08/1998
Tele2 Europe S.A e Tele 2 Italia S.p.A. Swisscom S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	15/09/1998 e 17/03/1999
	License for the setting up of a telecommunication network to provide voice telephony service	18/09/1998 e 28/04/1999
FCI Carrier Services S.r.L.	License for the setting up and provision of a public telecommunication network in the area of Milano, Roma and Palermo	17/11/1998
FCI Carrier Services S.r.L.	License to provide voice telephony service	17/11/1998
Società Impianti Televisivi SIT S.r.L.	License for the setting up of a telecommunication network to provide voice telephony service	17/11/1998 02/08/1999
Long Distance International Ltd	License for the setting up of a telecommunication network to provide voice telephony service	17/11/1998 e 28/04/1999
Citytel S.r.L.	License to provide public telecommunication network in the area of Milano	23/11/1998
Cable&Wireless S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Milano, Roma, Torino, Bologna, Firenze, Genova and Venezia	23/11/1998
Telefonica S.r.L.	License for the setting up of a telecommunication network to provide voice telephony service	14/12/1998
PlaNETwork Italia S.r.L.	License for the setting up of a telecommunication network to provide voice telephony service	14/12/1998 e 28/04/1999
Primosat Corporation S.r.L.	License for the setting up of a telecommunication network to provide voice telephony service	30/12/1998
Trans World Communications	License for the setting up of a telecommunication network to provide voice telephony service	30/12/1998
Worldlink S.p.A	License for the setting up of a telecommunication network to provide voice telephony service	30/12/1998
T.M.L. Telemedia International Ltd	License for the setting up of a telecommunication network to provide voice telephony service	30/12/1998 e 28/04/1999
MED 1 Italy S.r.L.	License for the setting up and provision of a public telecommunication network in the area of Mazara del Vallo	30/12/1998
Società Mineraria del Trasimeno SMT-gruppo ACEA S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Roma	30/12/1999
Viatel Global Communications S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Centre and Northern Italy	12/02/1999
Viatel Global Communications S.p.A.	License to provide voice telephony service	12/02/1999 26/06/1999

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SIS.TER S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Imola	12/02/1999
Onion Communication Italia S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	12/02/1999
Carrier 1 International S.A.	License for the setting up and provision of a public telecommunication network in the area of Milano and Lodi	14/04/1999
Carrier 1 International S.A.	License for the setting up of a telecommunication network to provide voice telephony service	14/04/1999
Flashnet S.p.A.	License for the setting up and provision of a public telecommunication network in the area of Milano and Roma	14/04/1999
Infostrada S.p.A.	License for the setting up and provision of a public telecommunication network on a national basis	14/04/1999
Flashnet S.p.A.	License to provide voice telephony service	26/05/1999
Welcome Italia S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service	26/05/1999
Plug It S.p.a.	License for the setting up of a telecommunication network to provide voice telephony service on a national basis	16/06/1999
Esprit Telecom Italia S.r.l.	License for the setting up of a telecommunication network to provide voice telephony service on a national basis	16/06/1999
@dria Com S.p.a.	License for the setting up of a telecommunication network to provide voice telephony service in the area of Friuli Venezia Giulia	16/06/1999
Global System Communications S.r.l.	License to provide voice telephony service on a national basis	16/06/1999
Interoute Telecom Italia S.p.a. (ex Skipper Telecom)	License for the setting up of a telecommunication network to provide voice telephony service on a national basis (extension of the former license for further investments)	16/06/1999
Colt Telecom S.p.a.	License for the setting up and provision of a public telecommunication network in the area of Milano and Torino. (extension of the former license for further investments)	16/06/1999
Omnitel Pronto Italia S.p.a.	License to provide voice telephony service on a national basis	16/06/1999
Cable & Wireless S.p.a.	License to provide voice telephony service on a national basis	16/06/1999
L.T.S. (Le Telecomunicazioni Siciliane) S.p.a.	License for the setting up of a telecommunication network to provide voice telephony service in the area of Sicilia, Milano and Roma	16/06/1999

GC Pan European Crossing Italia S.r.l.	License for the setting up and provision of a public telecommunication network in the area of Milano and Torino	16/06/1999
B.T.N. S.p.A.	License for the setting up of a telecommunication network to provide voice telephony service on a national basis	14/07/1999
Telexis S.r.l.	License for the setting up of a telecommunication network to provide voice telephony service on a national basis	14/07/1999
Selene S.r.l.	License for the setting up and provision of a public telecommunication network in the area of Brescia	04/08/1999
Worldlink Telecomunicazioni S.p.A	Extension of the license, to provide voice telephony service, on a national basis	04/08/1999

Company	Mobile telecommunication operators	Service provided
Telecom Italia Mobile S.p.A.		<ul style="list-style-type: none"> • TACS (analogue mobile communication services) • • GSM (digital mobile communication services on the 900 Mhz frequency) • DCS (digital mobile communication services on 1800 Mhz frequency)
Omnitel Pronto Italia S.p.A.		<ul style="list-style-type: none"> • GSM • • DCS •
Wind Telecomunicazioni S.p.A.		<ul style="list-style-type: none"> • GSM • • DCS •
Blu S.p.A Telecom Italia S.p.A.		<ul style="list-style-type: none"> • DCS • • DECT FIDO (digital enhanced cordless telecommunication) •
Spal Telecomunicazioni S.p.A.		<ul style="list-style-type: none"> • DECT •

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