

**Project:** **The Transformation of Political Mobilisation and Communication in European Public Spheres**

Project acronym: Europub.com  
Project website: <http://europub.wz-berlin.de>

Funded by: 5th Framework Programme of the European Commission  
Contract No. HPSE-CT2000-00046  
Work package: WP 4 (Internet)  
WP Coordinator: Ruud Koopmans  
Deliverable number: **D 4.1**

Working paper **Internet – a new potential for European political communication?**

Case report: **Italy**

Author: Lorenzo Mosca  
Date: 26 April 2002

---

## **Technological infrastructure**

Italy represents a unique case in EU context for its technological asset. The incumbent (Telecom Italia, main telecommunication company in Italy) provided its services through a peculiar technology based on the copper.

When the Italian government made the decision to spread broad-band technology in order to grant a faster and better access to the Internet, Telecom tried to build a different technological infrastructure, but finally adopted the existing infrastructure previously developed.

After the liberalisation of the Italian telecommunication market Telecom Italia brought ahead the “Socrate (Sviluppo Ottico Coassiale Rete di Accesso Telecom) plan”<sup>1</sup>. This project was meant to build a new technological infrastructure to provide services through broad-band technology, using optical fibres.

After performing the partial implementation of the plan, Telecom stopped the project because a more economic technology emerged: technology based on ADSL (Asynchronous Digital Subscriber Line). ADSL technology can work on copper existing infrastructure, avoiding additional charges.

In addition, we have to consider that, differently from other European states, Italy doesn't developed cable-television infrastructure which has been used in other countries to favour broad-band diffusion.

Real alternatives to the technological infrastructure of the dominant operator have not been yet developed. As it has been stated currently Internet market based its growth on the ADSL technology. This technology allows the transport of the data and telephone signal on the already existing network, avoiding the creation of a new expensive network. Nevertheless the most diffused method used by residential consumers to access the Internet consists of "dial-up" connection provided by the existing infrastructure and based on a system of tariffs proportional to the length of the connection (generally urban).

The table below shows the spreading of technologies tools in Italian families in recent years.

### **Degree of diffusion of technological tools in the Italian families (1995-1999).**

Technological tool	Year				
	1995	1996	1997	1998	1999
Personal Computer	13.6	17.3	21.5	23.7	26.6
Modem	1.6	2.8	5.6	6.7	8.6

Source: Autorità per le garanzie nelle comunicazioni, 2000.

The introduction of Freenet represented a turning point in Italian users' access to the Internet. In 1999, with the debut in Italy of the model "Freenet" originally developed in the United Kingdom, Internet has had an unexpected growth. The model foresees the free supply of the connection to Internet. The financing of the operators that offer the free service derives from a quota of the incomes of the urban calls and from the publicity and the sponsorships. In Italy the model has been launched by Tiscali, soon followed by other providers (Infostrada and Telecom Italia).

1999 was the year of the explosion of the residential use of the Internet, but the 2000 characterized itself for the emergence of unexpected elements of crisis. In 2000 the local loop

<sup>1</sup> The “Socrate plan” was effective between 1994 and 1998. In this period Telecom Italia realised a network based on optical fibres which involves almost 2 millions of buildings.

unbundling was implemented, allowing the "liberalization of the last mile" of the network and giving the possibility to new operators to offer the whole range of Internet services without possessing a technological infrastructure. The law 66/2001 aimed at regulating the phase of transition from the analogical to the digital technology and it indicated the year 2006 as final dead-line for the abandonment of analogical technology.

## **Internet governance in Italy**

At the end of 1997, following with some delays the European Commission directive on liberalisation, Italy started to open its telecommunication market. After the liberalisation, new operators (Wind-Infostrada, Albacom, Edisontel, Atlant, e-Biscom,...) entered the market and new technological infrastructures based on optical fibres were posed. Nevertheless those new infrastructures cover a very limited part of the country and they are not competitive with the old infrastructure of Telecom Italia based on the copper.

The reorganization of telecommunication market started in Italy with law 249/97, which had a series of significant consequences. It established the transformation of the minister of post and telecommunications in the new minister of communications.

The Italian way to the information society has followed two parallel paths characterized by the absence of an organic law settled by the political center and by an active role of the local actors which assumed an important function in the development of the ITCs (Information and Communication Technologies). The assumption of a central role by local administrations has been stimulated by a series of reforms: the direct election of the mayor of districts (*Comuni*); the attribution to local administrations of a more ample organizational autonomy; the reform of the public administration.

After a phase of relative stasis of the government, in 1999 it intensified the efforts for the development of Information Society. Three new structures have been instituted: the ministers' committee, the group of study and interministerial job and the Forum for the Information Society. The last one represents a political arena open to debate and mediation, capable to involve a large number of social actors.

The liberalisation of telecommunication market was supported and controlled by a series of authorities: the communication authority, the data protection commission, the authority for information technology in public administration, the competition authority.

### **a) Italian communications authority (<http://www.agcom.it/>)**

The Italian communications authority (*Autorità per le garanzie nelle comunicazioni*) was founded in the July 1997 and it was finally implemented in March 1998. According to the law that instituted the authority, it operates "in full autonomy and with independence in judgment and evaluation" (law 249/1997). Its activity of guarantee concerns: liberalization of the sector of the telecommunications, control on tariffs, promotion of technological innovation, etc. The institution of a unique authority of guarantee conceiving all sectors of communication has represented a novelty in the European context. Some countries have recently adopted some reforms inspired to the Italian model of a unique authority.

The authority was created to satisfy the strong European commission determination to liberalize the markets, particularly telecommunications market. In Italy the liberalization of the market of the telecommunications was accompanied by an almost total privatization and the change of ownership of the incumbent.

Italian government didn't provide an organic law for the liberalization of telecommunication market: "the adoption of European directives concerns specific acts and

not general laws; [the adoption occurs] often late in comparison to the community indications" ([http://www.agcom.it/provv/relaz\\_99/rel\\_p02.htm](http://www.agcom.it/provv/relaz_99/rel_p02.htm)).

The authority has promoted the "unbundling of the local loop", through the lease of the line owned by the incumbent to new service providers. This decision was made in order to grant competition and to favor the access of new operators to the market. The unbundling of the local loop allows new operators that enter in the market of the telecommunications, where the presence of the ex-monopolist is still strong, to establish direct relationship with the final consumer.

In this way, operators other than Telecom Italia can furnish the whole range of services of telecommunications, included the access to broad-band.

After the conclusion of the process of liberalization the authority solicits the evolution of the fixed networks toward the broad-band, the integration between networks furniture and transmission of data, the digital revolution in the television market.

#### **b) Italian data protection commission (<http://astra.garanteprivacy.it>)**

The Italian data protection commission (*Garante per la protezione dei dati personali*) is a collegial organ whose members are elected by the parliament. It was installed on March 1997. The commission, founded in accordance with a European commission directive, works in full autonomy. It fulfills a rather ample series of tasks. In the case of Internet, it grants the protection of the privacy and control on treatment of consumers' personal data.

There is a strong correlation between the development of the electronic commerce and the effective protection of personal data. Lots of services offered by ISPs are "defined as free but in reality they are not, because they are provided in exchange for a precious commodity, the personal data" (*Garante per la protezione dei dati personali* 2000, 3). The commission settled a series of rules in order to sensitize Internet users that often "don't know that their personal data have been picked up and subsequently elaborate and that they could be used for purposes obscure to them" (*ibid.* 72).

In 2001 electoral campaign, political parties used the Internet and mobile phones as important arenas of political communication and electoral propaganda. In order to gather information, political parties used methodologies not always conforming to the normative on personal data's protection. On November 2000 the commission started to verify the political communication strategy of the national association "Lista Pannella", after receiving numerous complaints from citizens. Those complaints denounced the reception of e-mails containing political communication messages. The association had gathered over 390.000 addresses of e-mail using a software that captured e-mail addresses published on web-pages with suffixes ".it", ".org", ".com" and ".net". The guarantor has established their illegitimate and incorrect use.

#### **c) Authority for IT in the public administration (<http://www.aipa.it>)**

The AIPA, Authority for Information Technology in the Public Administration (*Autorità per l'informatica nella pubblica amministrazione*), is an independent authority established in 1993, constituted by five members named by the Prime Minister. In 1998, Internet has been introduced in a significant measure in the Italian public administration. Three were the main objectives of the introduction of the Internet in the public administration: to spread information on the institutional activity to citizens, to furnish on-line services to citizens and to improve administration's inside communication. In 2000 the Italian government has launched the plan of action for the society of the information, in accordance with the European program e-Europe 2002, adopted in the European summit of Feira on June 2000.

Even if the situation is gradually improving, the actual level of informatisation of the administrations is still unsatisfactory. The main problem is in the lack of qualified personnel. The engagement of Public administration in on-line dialogue with citizens and the supply of services through the Internet is still modest.

#### **d) Italian competition authority (<http://www.agcm.it/>)**

The Italian competition authority (*Autorità garante della concorrenza e del mercato*) has recently opened a series of procedures against Telecom Italia for abuse of dominant position. The authority has also made a stand against Telecom Italia's intention to merge with other operators. Hence the authority promoted investigations "to avoid that the ex-monopolist could use some dominant position already acquired, in order to reduce the number and possibilities of competitors in new markets" (*Autorità garante della concorrenza e del mercato* 2001).

Telecom has tried to conquer a dominant position in the market of services of connection to the Internet, imposing particularly disadvantageous contractual conditions for the access to the telephone network to its competitors (*Autorità garante della concorrenza e del mercato* 2000).

### **E-government and Civic Networks**

Recently the important role of e-government was stressed by the Italian government which presented an ambitious plan to be implemented within 2006. The main purposes of the plan consist in: providing all main services to citizens and firms on-line; using technology in order to improve public administration efficiency and transparency; introducing adequate training for all public employees; creating a system of customer satisfaction (<http://www.pianoegov.it>).

In Italy web-sites of public administration are generally centered on district (*Comune*) level. This is the reason why some scholars use the expression "digital cities". Existing literature on public administration on the Internet refers to these experiences as "civic networks" (*Reti Civiche*), referring to the north-American experience of communities networks.

Generally speaking, it is possible to single out three different types of web-sites of public administration in Italy: sites offering information for the tourist promotion; sites spreading administrative or procedural information destined to citizens; sites providing spaces of interactive communication between users and institutions.

The annual report on digital cities in Italy which investigates the situation during 2000, underlines the strong presence of different administrative levels on the Internet. All the 20 Italian regions (*Regioni*<sup>2</sup>), 91% of provinces (94 on 103), 93% of the big districts (96 on 103) and almost half of the small districts (46,3%) have an official web-site, managed and realized directly by the local administration. Besides the presence of the administrations on Internet, it has increased the informative accuracy of these sites. From the report on digital cities it emerges an elevated level of informative abundance, while the interactivity has still been limited to the web-sites of the big districts. The same report informs on the contents of the web-sites focused on: proclamations and contests (67% of the big districts); education and formation (61,9%); social services (56,7%); employment (80% of the regions). Even if interactivity provided by web-sites is still very modest, publication of administrative personnel's e-mail addresses starts to spread on big districts web-sites (27,8% of them). Only

---

<sup>2</sup> Italians's *Regioni* can be easily compared with French's *Régions*, Spanish's *Comunidades Autonomas* and German's *Lander*.

5,2% of the web-sites introduces the possibility of communicating with the administration through forms.

The phenomenon of civic networks is particularly spread in those regions with more rich participative tradition (center Italy). Nevertheless the civic networks more than as a place of communication and interaction, are still used by administration as channels for spreading information to citizens.

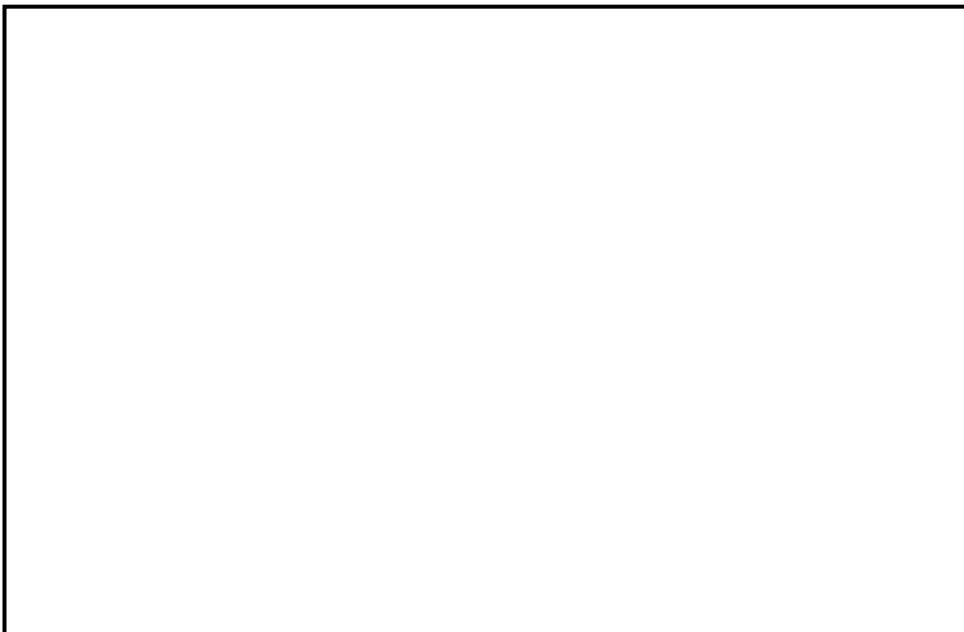
The experiences of civic networks have brought to a significant increase of the informative offer, favoring the access to the acts of public administration and guaranteeing to citizens administrative transparency (Rur 2001). Nevertheless the civic networks have often shaped as "showcases", limited to the diffusion of information, while the aspect of interactivity and communication has assumed a marginal role until now (De Rosa 2000a). The activity of the civic networks "doesn't seem to have seriously influenced political choices, the agenda setting and citizen's participation to decision-making processes" (*ibid.*, 159).

While real possibilities of expressing their own opinion are offered to citizens, in the largest part of the cases, new technologies "generalize the possibilities of expression without giving guarantees of listening (...). [The citizens] have not real possibilities of influencing the decision-making" (<http://www.cittadigitali.it/teledemocrazia>).

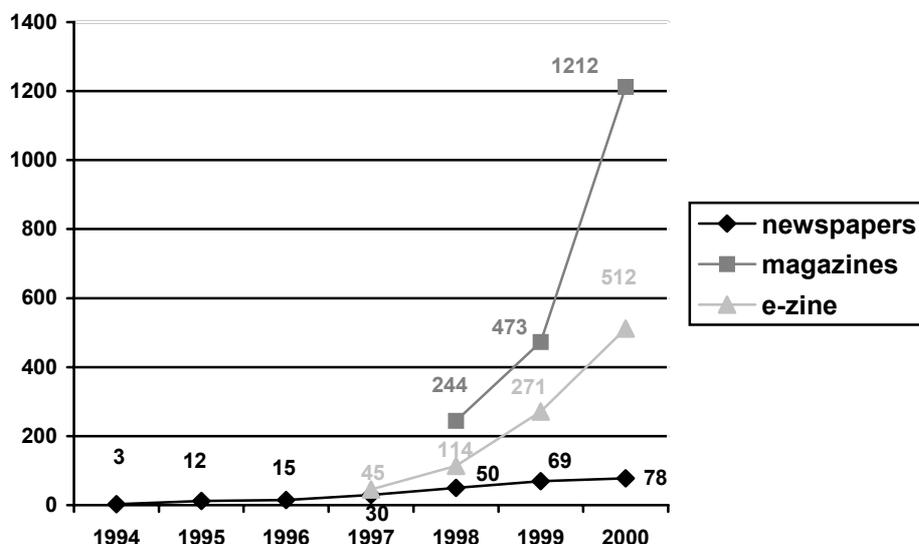
### **Media actors.**

The presence of newspapers on the Internet has dramatically risen in last years. It passed from 3 on-line newspapers in 1994 to 78 in 2000. Between 1995 and 1996 main Italian newspapers activated their web sites and their on-line editions. In 1997-98 the first e-zines (electronic magazine) were created. E-zines are on-line magazines without a correspondent off-line edition. In the same year, main press agencies (Reuters, Associated Press, Ansa, Adnkronos, Asca) created their own web-sites. In 1998-99 those web-sites are no longer advertising showcases for papery products since they starts to provide original contents. In the same year web-sites of the newscasts were created, too.

Nevertheless in 1999 only three newspapers (La Repubblica, La Gazzetta dello Sport, Il Sole-24 Ore) had promoted on the web a significant differentiation from the papery production. As a matter of fact, the largest part of newspapers (around 60% of most important) and magazines was present on the web but limited their presence on the web to a simple transposition, total or partial, of the papery edition.



### Growth of on-line publications in recent years (1994-2000).



Starting from the beginning of 2002 the web-site of "La Repubblica" demands the payment of a subscription to the users interested in reading on-line the papery edition of the newspaper and in consulting its archive. Since the percentage of people reading newspapers in Italy is not high if compared with others European countries, it represents a very interesting experiment.

The figure below shows the audience of Internet users reached by the most important Italian newspapers and press agencies. It's interesting to notice that the ranking of on-line edition of Italian newspapers is different from the ranking of papery editions (note that "La Repubblica" is the 2<sup>nd</sup> Italian newspaper and "Il Corriere della Sera" is the 1<sup>st</sup> one). Readers of on-line newspapers and magazines have been estimated in 38,2% (3.250.000 users) of all Internet users.

### Reach of the main on-line newspapers and press agencies.

Newspapers and press-agencies	URL	Users (.000)	%
La Repubblica	www.larepubblica.it	1.138	33.5
Il Sole24Ore	www.ilsole24ore.it	1.052	31.0
Il Corriere della Sera	www.corriere.it	570	16.8
Milano Finanza	www.milanofinanza.it	211	6.2
La Stampa	www.lastampa.it	155	4.6
La Gazzetta dello Sport	www.gazzetta.it	152	4.5
Ansa	www.ansa.it	109	3.2
AdnKronos	www.adnkronos.it	85	2.5
AGI	www.agenziaitalia.it	16	0.5
Asca	www.asca.it	15	0.5
Others		984	29.0

Source: Between, Speciale per Prima Comunicazione, april 2000.

The figure below shows the main visited domains by Italian Internet users.

**Main visited domains in december 2000.**

Rate	Domain	Reach (%)	Users (.000)	Rate	Domain	Reach (%)	Users (.000)
1	Iol.it	59.1	3.780	11	Geocities.com	28.7	1.834
2	Virgilio.it	53.9	3.450	12	Msn.it	27.4	1.754
3	Microsoft.com	48.9	3.129	13	Xoom.it	27.0	1.728
4	Tiscalinet.it	44.1	2.823	14	Altavista.com	26.6	1.704
5	Kataweb.it	39.0	2.495	15	Yahoo.it	24.1	1.542
6	Yahoo.com	34.9	2.233	16	Passport.com	20.7	1.327
7	Supereva.it	33.2	2.124	17	Msn.com	19.1	1.221
8	Jumpy.it	30.5	1.952	18	Omnitel.it	18.3	1.174
9	Tin.it	29.4	1.879	19	Clarence.it	17.4	1.112
10	Tripod.it	28.9	1.850	20	Altavista.it	16.5	1.057

Source: One to One Research 2001.

The figure below shows the present situation about ISPs in Italy.

**Main Italian ISPs in September 2001.**

ISPs	Reach (%)
Libero-Infostrada	24,2
Tiscalinet	11,5
Tin.it	11,2
Wind	7,9
Msn-hotmail	6,7
Yahoo-Italia	5,6
Kataweb	3,1
Virgilio	3,0
Italia-On-Line (IOL)	1,9
Others	24,9

Source: panel e-search<sup>3</sup>.

**Political parties on the web.**

The 1996 political Italian elections have represented "the debut of the political communication in Internet" (De Rosa 2000b, 11). Elections were perceived as an important occasion by many Italian parties, which created their own web-sites. They activated their web-sites since they believed that their presence on Internet was considered as an indicator of modernity by the electorate (Bentivegna 1999). Analysis of the presence of parties on the Internet shows clearly that the largest part of their web-sites are shaped as a showcase, limited to the offer of information, and they don't exploit interactivity's opportunities provided by new technologies.

<sup>3</sup> <http://212.102.32.203/intranet/ESEARCH/Prodotti/comunicato-provider.PDF>

With regard to parties' presence on the web, the situation has partially improved with the general political elections on May 2001: percentage of candidates on the web have reach 10% of those of the Chamber of Deputies (*Camera dei Deputati*) and 17% of those of the Senate (*Senato della Repubblica*). On this occasion hi-tech web-sites have also made their appearance, fully exploiting the interactive opportunities of the Computer Mediated Communication (Bentivegna 2001).

Nowadays it seems all parties perceive the fundamental importance of their presence on the Internet. Differently from traditional mass-media, the Internet excludes gatekeepers selecting the content of information provided to the audience: the Internet allows "the creation of communicative flows entirely controlled by the producer" (Bentivegna 1999, 39).

The first empirical surveys on the Italian case show that "the Internet doesn't produce a growth of the quota of interested subjects to the political dimension, but it fixes and it strengthens a preexisting interest" (*ibid.*, 98).

According to a survey conducted by Fiore (in Bentivegna 1999) on a sample of 100 individuals joining Italian political newsgroups, people joining political newsgroups shows particularly elevated rates of political participation, both in conventional forms than in unconventional (see figure below).

#### Political participation of newsgroups users compared with the Italian population.

	Newsgroups Users (%)	Italian Population (%)
Communication (talking of politics, watching political programs on the television,...)	86.3	67.5
Participation to assemblies, demonstrations, ...	29.4	11.7
Activism (to develop non-paid activities for parties)	45.1	1.5

Source: Bentivegna 1999, 121.

According to the same survey people participate in newsgroups above all to satisfy expressive needs, more than to persuade or to recruit other people. 26.1% of interviewed affirm to participate to newsgroups to express their own opinion on specific issues, 25.2% to compare their own position with that of the others, 20.4% participate in order to know what other people think (*ibid.*, 122).

The following figures shows some data on Italian political parties' web sites. We selected only some parties in order to offer to the reader a more clear image of the current situation.

#### Main political Italian parties: year of foundation, date of creation of the web-site and URL.

Political Party	Foundation's date of the party	Date of web site's creation	URL
<i>Right-wing parties</i>			
Centro Cristiano Democratico (CCD)	1993	June 1998	www.ccd.it
Cristiano Democratici Uniti (CDU)	1995	*	www.cdu.it
Forza Italia	1994	February 1995	www.forza-italia.it
Alleanza Nazionale (AN)	1995	December 1995	www.alleanzanazionale.it
Lega Nord	1991	*	www.leganord.org
Democrazia Europea (DE)	2001	*	www.sergiodantoni.it
Lista Radicali/Bonino	1994	*	www.radicali.it
Movimento Sociale-Fiamma Tricolore	1995	*	www.msifiammatric.it

(MS-FT)			
---------	--	--	--

<i>Left-wing parties</i>			
Italia dei Valori	2001	*	www.antoniodipietro.org
Margherita	2001	*	www.margheritaonline.it
Socialisti Democratici Italiani (SDI)	1994	*	www.socialisti.org
Democratici di Sinistra (DS)	1991	January 1996	www.dsonline.it
Partito dei Comunisti Italiani (PdCI)	1997	May 1999	www.comunisti-italiani.it
Verdi	1987	*	www.verdi.it
Rifondazione Comunista (RC)	1991	March 1996	www.rifondazione.it

Source: Bartali 2000, 10.

\* missing

data

### Main characteristics of some Italian political parties web-sites.

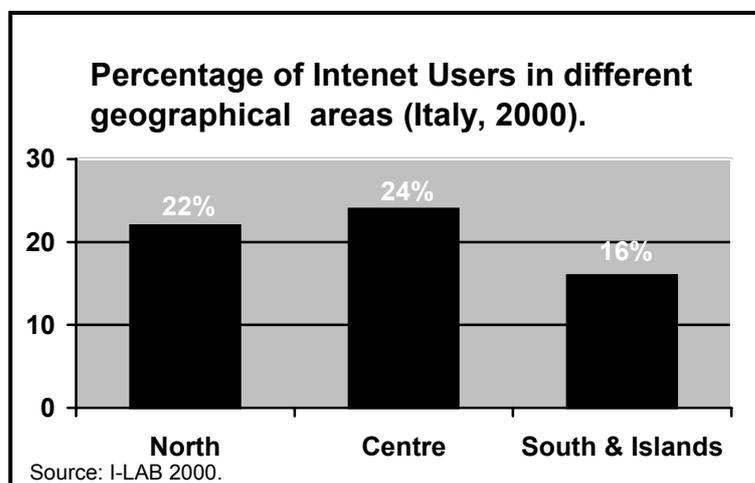
Political party	Web-sites characteristics						
	Animated icons	Interactive tools	Links	Research engines	Audio and video archive	On-line subscriptions	English version
<i>Larger parties</i>							
Forza Italia	●	●	●		●		●
Margherita	●	●	●		●	●	
AN	●		●	●	●		●
DS	●	●	●	●	●	●	
RC		●	●	●	●	●	●
<i>Smaller parties (new politics/pro-system parties/anti-system parties)</i>							
Lega Nord	●		●		●		
CCD	●	●	●		●		
CDU			●				
SDI			●				
PdCI	●		●	●			●
Verdi		●	●	●	●		
Italia dei Valori	●				●		
DE			●				
Radicali		●	●	●	●	●	
MS-Fiamma	●			●	●		

As the tables above show, all main Italian political parties have a web-site. It's important to notice that significant differences were detected among these sites. Almost all analyzed web-sites have advanced graphics with animated icons and show links to other sites. It seems parties are also very interested in giving their sympathizers the possibility to have access to radio and video archives. On the contrary quite surprisingly is the scarce presence of search engines which are an important instrument for the user to find information faster. Very reduced is also the availability of interactive tools like forums, mailing-lists, chat-lines, on-line surveys, etc. Since they require professional staff to be implemented, probably some parties didn't consider a good strategy to invest resources on them.

Finally it's interesting to notice that only few parties on the web give their sympathizers the possibility to do on-line subscriptions. Only few of them are interested in making their site accessible to foreigners users, providing an English version of some contents of their web-site.

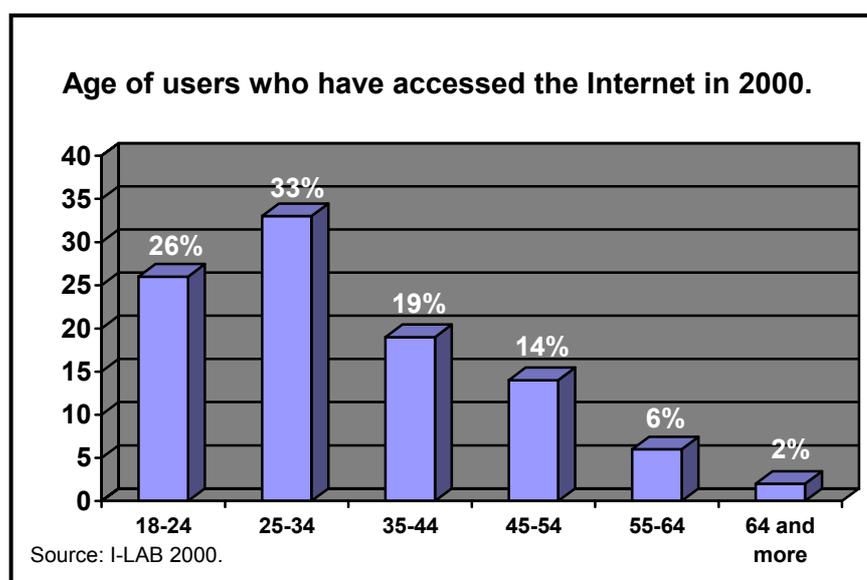
## User's profile: geographical area, age, gender and education.

The figure below shows the diffusion of the Internet in different Italian geographical areas.



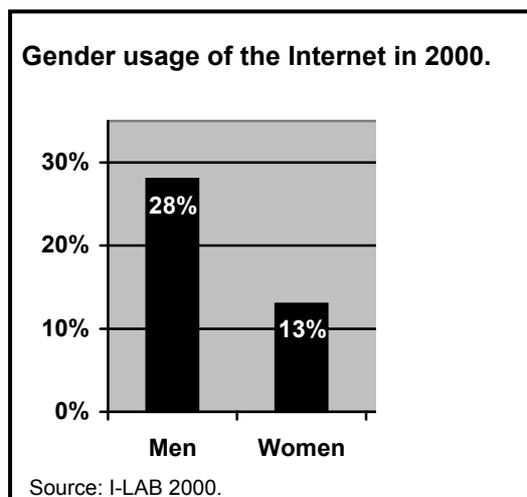
In the figure it is possible to notice very clearly that the more depressed economic area (south and Islands) has the worst performance. Italian regions with the best performance above all are Lazio (26%) and Lombardia and Tuscany (both 23%).

The figure below displays a very high correlation between the use of the Internet and the age of the users. Internet is more diffused among young people, being the 25 to 34 old people the most over-represented group.



Even if gender asymmetry in the use of the Internet has been reduced, a difference still persists between the percentage of male and female accessing the Internet: 13% of female and 28% of male population access the Internet. Last years show a significant growth of the

access to the Internet of the female population. Nowadays there are almost 3.200.000 of female Internet users.



A serious aspect concerns the relationship between level of education and usage of the Internet. Usage of Internet grows proportionally to the degree of education. Less educated groups of the population are the main sufferers of the "digital divide".

**Internet users according to formal level of education.**

<b>Educational level</b>	<b>Internet Users (%)</b>
Elementary school (5 years)	0
Secondary school (3 years)	13
High school (5 years)	67
University	20

Source: I-LAB 2000.

## References:

- Autorità garante della concorrenza e del mercato, 2000, *Relazione sull'attività svolta nel 1999*, Roma, Presidenza Consiglio dei Ministri.
- Autorità garante della concorrenza e del mercato, 2001, *Relazione sull'attività svolta nel 2000*, Roma, Presidenza Consiglio dei Ministri.
- Autorità per l'informatica nella pubblica amministrazione, 2001, *Relazione annuale 2000*, Roma, Presidenza Consiglio dei Ministri.
- Autorità per l'informatica nella pubblica amministrazione, 2002, *Relazione annuale 2001*, Roma, Presidenza Consiglio dei Ministri.
- Autorità per le garanzie nelle comunicazioni, 2000, *Relazione annuale sull'attività svolta e sui programmi di lavoro*, Roma, Presidenza Consiglio dei Ministri.
- Autorità per le garanzie nelle comunicazioni, 2001, *Relazione annuale sull'attività svolta e sui programmi di lavoro*, Roma, Presidenza Consiglio dei Ministri.
- Bartali, R., 2000, *La nuova comunicazione politica: il partito telematico. Una ricerca empirica sui partiti italiani*, in "Working papers del Dipartimento di Scienze Storiche, Giuridiche, Politiche e Sociali" 40/2000 (<http://www.gips.unisi.it/politics/documents/40.pdf>).
- Bentivegna, 1999, *La politica in rete*, Roma, Meltemi.
- Bentivegna, 2001, *La prova generale del 2001: candidati e elettori nel mare di Internet*, in "Comunicazione politica" 2/2001.
- De Rosa, R., 2000a, *Fra comunicazione e politica. Gli spazi virtuali della democrazia che cambia*, paper presented to the annual meeting of SISP (<http://www.sisp2000.unina.it/papers/articles/derosa.doc>).
- De Rosa, R., 2000b, *Fare politica in Internet. Come le nuove tecnologie influenzano la politica*, Milano, Apogeo.
- Garante per la protezione dei dati personali, 2001, *Relazione per l'anno 2000*, Roma, Presidenza Consiglio dei Ministri.
- Garante per la protezione dei dati personali, 2002, *Relazione per l'anno 2001*, Roma, Presidenza Consiglio dei Ministri.
- Rur, 1998, *Le città digitali in Italia. Rapporto 1997*, Milano, Franco Angeli.
- Rur, 1999, *Le città digitali in Italia. Rapporto 1998*, Milano, Franco Angeli.
- Rur, 2001, *Le città digitali in Italia. Rapporto 1999-2000*, Milano, Franco Angeli.
- Rur, 2002, *Le città digitali in Italia. Rapporto 2000-2001*, Milano, Franco Angeli.