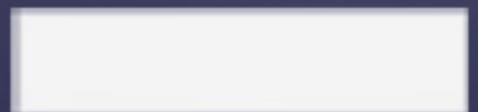
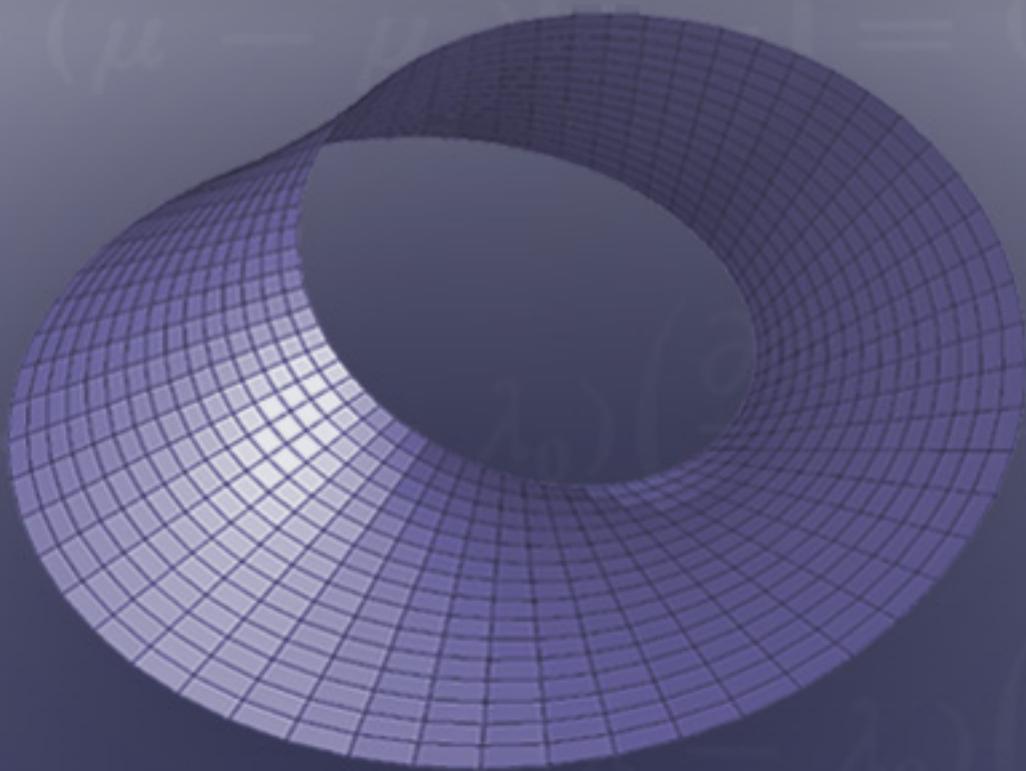


Greece going digital
An overview of the digital media in Greece



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Introduction

The status quo of new technologies in Greece is characterised, firstly, by the augmentation of Internet use and its commercial exploitation by both public and private organisations. Especially private companies are beginning to realise the potential of the Internet and the possibilities offered to them for further, electronic expansion of their activities.

As far as CD-ROM production is concerned, it advances at a remarkably slow pace, mainly because of high production costs and the fierce competition by US and European off line products.

Finally, the introduction of digital TV marked, in 1999, the beginning of a new era in TV viewers' habits. However, it is still early for assessing the course of digital platforms and for predicting operation conditions in the near future.

Facts concerning the present state of the CD-ROM industry, the on-line media and the digital TV in Greece are presented in the following analysis.

a) CD-ROMs

The multimedia production sector in Greece is a rapidly developing market. It is notable that in 1997 title production grew at a rate of almost 100% in relation to 1996. Both publishing and informatics entities are following a strategy of long-term planning and specialisation in different thematic areas. Distribution channels have been improved with the addition of the fourth, in the whole, company entering that specific sector, although none of the four ("E-Motion", "Multirama-Germanos", "One

Way Technostores” and “Pouliadis and Associates”) concentrates exclusively on multimedia distribution. Moreover, multimedia production is strongly supported by professional unions and research centres and during 1998 a considerable number of trained professionals has been employed by multimedia entities and specialised publications. Most of the latter have developed in-house production departments in the context of an added-value products strategy (Kyriakoulakos, 2000).

The thematic areas of production mostly developed in Greece are “education”, “arts and culture”, “tourism”, “music”, “encyclopaedias” and “children’s”. Due to the complex organisation and considerable cost of the production of games in CD-ROM format, only seven (7) titles of that specific thematic area have been produced by Greek multimedia companies.

The total turnaround of the multimedia production sector in Greece is estimated, for the year 1996 at approximately 2,6 billion GRD (8,6 million EURO), with twenty-seven (27) firms concentrating exclusively or partially on multimedia production. Three (3) of these firms are sited in Thessalonica. They employ from two to five specialists and are using freelancers in periods of intense production. Most of these firms originate from the informatics sector (43%), while the audiovisual and publishing sectors have not yet acquired a satisfactory percentage (18% each). It is notable that only 18% of these firms concentrate exclusively on CD-ROM production. (Ibid.).

As far as production cost is concerned, corporate presentations in the form of CD-ROM usually cost from two to four million GRD (maximum: six million) and are published in a limited number of copies.

The cost for productions concerning arts and culture amounts to twenty million GRD although it can reach eighty-five million depending on the quality of the title under production or in the case of multilingual versions and copyrights.

The average production cost for research titles amounts to eighty million GRD due to the need for original software. Most of these titles are financed by European or Greek research programmes (Ibid.)

The following comparative table can contribute to the understanding of the size of the Greek market and the production costs:

Financial comparative data for “arts and culture” productions

Country of Origin	Production Cost	Average no. of sold copies	Average sale price
Greece	20,000,000 GRD	2,000	10,000-15,000 GRD
France	96,000,000 GRD	20,000	14,000-28,000 GRD

Source: Kyriakoulakos, 2000

As it can be derived from the above data, the multimedia market in Greece is relatively small. Potential buyers amount to 2,500 and are expected to purchase each Greek title within six months of its introduction. In addition there is a number of multimedia production sponsors such as the following: five museums, six publishing houses, twenty-five state organisations, as well as University and European research projects. The latter have financed a significant number of specialised productions that target niche markets.

Although the prospects of the Greek multimedia market seem rather promising, there are a number of serious issues, which must be faced.

Firstly, Greek productions face intense competition from foreign titles. It is notable that in May 1997, in a total of 19,000 titles published internationally, 2,800 were available in the Greek market and amongst them, only 35 were Greek productions. Although there is a steady augmentation of the titles published, it is still very difficult to compete with the variety and quality of foreign productions and to attract potential customers (Ibid.).

In addition, some of the Greek productions are published solely in English as they are financed by European research projects. This fact is another setback for the creation of a strong, purely Greek profile amongst potential customers.

Another problem is piracy. As a writable CD-ROM costs only 1,500 GRD, the creation and sale of illegal copies is rather easy. The only method to solve this problem and to expand the market would be to lower prices. However, there is always the question of the viability of multimedia entities in a market as small as the one in Greece.

Moreover, the lack of exclusive multimedia distribution channels affects all marketing strategies applied in the multimedia sector, as its products are inadequately promoted.

b) Internet

In Greece it is estimated that, at the present, the number of Internet users exceeds 1 million, where 80% of them are connected via a local area network (LAN) and only 20% have established an Internet connection through an Internet service provider (ISP).

The average age of Greek Internet users (36 years) is quite young in comparison with the one of users in other countries, with the exception of the United States, where 40% of the users age between 12 to 17 years. This is due to two main reasons: a) that

young people are easily familiarised with technological innovation and b) that almost 120,000 users in Greece are students and members of research centres. At the moment, there are 18 Universities, 14 Polytechnics and 13 research centres registered in the National Network of Research and Technology (which is the official Internet provider for academic institutions). These institutions had also the opportunity to upgrade their equipment (hardware and software) through EU financing programmes, which made access easier and faster (Pournara, 1999: 32).

The vast majority of the Greek users have a university degree. Specifically, 81% are students, or have studied, at Universities, Polytechnics, or hold a postgraduate degree, 18% are high school graduates and only 1% holds a lower degree. In addition, 60% and 25% of the users reside in large or smaller urban centres, respectively, and only 15% in the country (Ibid.). These percentages, when examined in correlation, can be easily interpreted given that the Greek rural population consists, in general, of aged citizens who are alienated with technology and that there is a significant percentage of illiteracy.

Nevertheless, one of the major setbacks for the extended use of the Internet in Greece is its cost. According to data published in Forbes magazine, Greece is the fourth most expensive country in terms of Internet connection. It is notable that, since January 1999 there was an increase of connection cost per minute of more than 100%. At the moment, the Single Panhellenic Call Number (EPAK) constitutes the only feasible solution to this problem. The license for the use of this number is provided by the Greek Telecommunications Organisation (OTE) to the Internet providers complying with specific technical standards. As a result, a number of smaller Internet providers that do not comply with OTE's standards are not in a position to effectively face

competition. The users that are able to use the EPAK are charged 240 GRD per minute (during “traffic” hours), instead of 360 GRD, while after 10 p.m. the standard charge of 180 GRD is reduced to 60 GRD for the users of the EPAK.

The considerable connection cost explains the fact that the income of the majority of Greek users (60%) can be considered as high (more than 300,000 GRD per month). Moreover, 36% are freelancers and 25% company executives. The Internet is used mostly for professional reasons (53%), for entertainment (30%) and education (17%). In addition, 65% of the Greek users are men, although, during the last three years, the number of women using the Internet has been rapidly increasing.

As far as media on the Internet are concerned, there are at the moment approximately 200 newspapers, magazines, television and radio stations throughout Greece that have a Web version¹. The Press (magazines and newspapers) maintains a most active presence on the Internet with a percentage of 33% and 28%, respectively. Radio stations follow with 30% while TV stations have the smallest percentage of Internet sites with only 8.5% (FORTHnet, 1999).

Moreover, it is notable that the majority of Internet sites concerning media are concentrated in the area of Athens and the Saronic Gulf (42%). This is due to the fact that the vast majority of the Greek media operate in urban centres and mostly in Athens, in which resides almost half of the country’s population (Ibid.).

As far as electronic commerce is concerned, Greek firms are just beginning to realise the value of the World Wide Web as an entrepreneurial tool. According to Athanassopoulos (1998: 8), in 1997 there were approximately 450 Greek firms with

¹ There are also four electronic magazines (Your Personal Success e-zine, NetLife Ezine, bubbl magazine on the Net and Woman Today On Line Magazine) as well as one electronic fanzine (Tombstone Fanzine).

Internet presence. The results of relevant research showed that their presence mainly concerns “...information provision and distribution activities” (Ibid., p. 13) while their communicative parameters are still at an experimental stage.

Another interesting parameter concerning the Internet in Greece, is the intense investment in portals, mainly by “traditional” media entities (newspapers and magazines publishing groups).

Alexa Research (www.alexaresearch.com) published the following data, concerning a general overview of the Greek portals:

INTERNET SITES	PAGEVIEWS PER MONTH
<i>PORTALS</i>	
in.gr	26.701.000
pathfinder.gr	1.705.000
thea.gr	972.000
pan.gr	701.000
ibomm.gr	209.000
<i>CONTENT PROVIDERS</i>	
naftemporiki.gr	11.458.000
hellasyellow.gr	2.670.000
dolnet.gr	2.076.000
sportnews.gr	1.851.000
enet.gr	1.741.000
<i>INTERNET SERVICE PROVIDERS (ISP)</i>	
hol.gr	3.930.000
forthnet.gr	3.018.000
otenet.gr	2.951.000
x-treme.gr.gr	833.000

Pageviews per month for the time period March-July 2000 (www.alexaresearch.com)

In more detail, **in.gr**, officially on-line since 25/10/1999, offers a search engine, a very well organized directory of the greek internet sites, news (always updated), free on-line access to Athens Stock Exchange, free e-mail account, personal calendar, chat room, many useful categories (i.e. weather report, dictionary, entertainment guide concerning Athens and Thessalonica e.t.c.) as well as separate categories for special events or news for instance the Olympic Games of Sidney 2000 or the results of the university entrance exams in Greece. In addition, **in.gr** offers -in collaboration with the mobile telephony company Telestet- various portal services that support the wireless application protocol (WAP)².

Pathfinder.gr offers a search engine, Greek internet sites' directory, news, free on-line access to Athens Stock Exchange, free e-mail account, personal agenda, chat room, some useful categories like weather reports, favourite sites etc. We should point out the fact that in many categories pathfinder.gr redirects the users to in.gr. Also the user is able to adjust the home page in order to create his/her own home page according to his/her preferences.

Thea.gr offers a search engine, directory of the Greek sites, news, free access to Athens Stock Exchange, bookmarks, chat room and categories concerning some of the hottest news or events.

Pan.gr offers a search engine, directory of the Greek internet sites, free e-mail account, free on-line access to Athens Stock Exchange, news, entertainment and travel guide. Also there is a special category about WAP services; **pan.gr** offers these services with the collaboration of the mobile telephony company Panafon. Through **pan.gr** Panafon offers cellular phone and ISP services. **Pan.gr**, also, hosts an

² According to unofficial data, the number of WAP users in Greece is estimated at 1,500. Research concerning WAP use is still at an embryonic stage in Greece.

electronic shop in collaboration with other companies that support e-commerce and offer their products, also, through **pan.gr**. “*My Pan*” is the service that gives the ability to the user to adjust the home page according to his/her preferences.

Iboom.gr offers a search engine, a directory of the greek internet sites, news, free access to Athens Stock Exchange and also the latest news from other Stock Markets, WAP services, free e-mail account, chat room and “*my boom*” service, that offers the possibility of tailoring the home page according to each user’s preferences.

Recently, another portal was launched, **flash.gr**, that is specialized in information services. There is of course a search engine but it’s only for the portal’s content. Apart from news and, generally speaking, information services, **flash.gr** offers interviews and detailed opinion articles and reports concerning the latest news, something very similar to a newspaper’s first page layout. **Flash.gr** also offers free access to Athens Stock Exchange, free e-mail account, chat room and some other useful categories. The user is able to set the home page according to his/her preferences (that is “*my flash*” service). Of course, we should mention that **flash.gr** is now in a trial period and thus changes and improvements are expected to occur.

Mobile telephony company Cosmote recently announced “**My Cosmos**” service in collaboration with Microsoft. **My Cosmos** is a ‘package’ of services available for every mobile telephony device and not only for mobile telephony devices supporting WAP. That is because these services are available via WAP, short written messages service (SMS) and also via the ‘smart’ Sim Card, provided by Cosmote. The services offered are:

1. *Information Services*: news, weather reports e.t.c.

2. *E-mail service*: Cosmote offers a free e-mail account. Every user is able to access his/her account, send and receive e-mails through a computer, connected to Internet, or through his/her mobile phone through the above mentioned procedures.
3. *Financial Services*: Mobile Banking in collaboration with Piraeus Bank (for the time being) and on-line information about Athens Stock Exchange and user's portfolio.
4. *Entertainment Services*: a guide to cinemas, theatres and restaurants
5. *Search Engine through specified directories*.
6. *Customer Service*.
7. *Free access to every WAP page* (available only for devices that support WAP)

Also we should mention that Cosmote recently announced an agreement among Cosmote, OTEnet (an ISP company in Greece owned like Cosmote by OTE, the Greek Telecommunications Organization) and Yahoo!Europe (member of Yahoo!Inc). The agreement, among other things, provides Cosmote the right to offer Yahoo! services through WAP or Internet Protocol to all company customers. Consequently, this agreement is expected to strengthen Cosmote's position in the mobile communication field, especially in relation to portal services via WAP.

c)Digital TV

The first step for the introduction of digital TV in Greece took place in 1994, when the cable channel "Filmnet" (by Multichoice S.A.) introduced a totally new way of receiving and watching television programmes. Its content consisted solely of cinema

films that were broadcasted continuously, without advertising breaks. During the following two years (until 1996), Multichoice S.A. introduced two more specialized cable channels: Supersport (which broadcasts solely athletic events, in most cases, exclusively) and KTV (which broadcasts children's programmes).

In December 1999, Multichoice announced the launching of NOVA, the first Greek digital platform.

The services offered by NOVA³, are the following:

- Premium Programmes: Filmnet, Filmsat, SuperSport, K-TV.
- Private TV stations: Mega, Ant1, Star, Mad TV, New Channel, Alter 5, ET 1, NET.
- Thematic Programmes: BBC World, CNN Int'l, Cartoon Network, Discovery.
- Information Services: Greek TV Guide (current and future), various information about the programmes' content.
- NOVA Guide: Cinemas, Hospitals, Pharmacies, Useful telephones' directory and NOVA CD (information service about Tempo songs).
- Audio: Tempo 1, 2, 3, 4, 5.
- Commercial Radio Stations: Love Radio, Melody FM, Sky 100,4, ERA 3, Church of Greece Radio Station.
- Free Choice Satellite Programmes: More than 100 choices.

In the near future, NOVA will be in the position to offer additional services, such as:

- * EEPG (Evolved Electronic Programme Guide)
- * NOVA sport statistics / Curriculum Vitae of Athletes and Actors (Choice Menu)
- * Electronic manual for the NOVA decoder

³ The specific data were provided by Multichoice S.A., according to relevant press releases and corporate presentations.

- * Bank and stock exchange tele-transactions
- * T-commerce
- * Guide of Public Services
- * Food delivery
- * Tele-shopping
- * Electronic Games
- * Interactive advertising

Although the above mentioned services are quite attractive, it must be stressed that both subscription and receivers' infrastructure costs are still quite high. In correlation with the fact that technological penetration in Greece advances quite slower in comparison with other EU member states, this surely constitutes an obstacle for further expansion. One must also bear in mind that the Greek market is quite small; therefore it is probably too early for predictions concerning competition and the launching of more digital platforms.

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