

The Financial Aspects of Internet Electronic Publishing in Macedonia

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Abstract

The following article does not intend to present a comprehensive analysis of the financial aspects of Web publishing in Macedonia, as the author does not possess the resources to achieve such a task, nor is it his professional occupation. The goal of this work, rather, is to give a general overview of the financial aspects of Web publishing in Macedonia, by examining the commercial firms which offer Web hosting, Internet access and HTML design. Through the example of Mi-An Publishing's home page (<http://www.unet.com.mk/mian>), the article also assesses the financial aspects of the entire process of HTML code creation and Web page design. Furthermore, the issues of Web advertising, copyright and software use are covered. The data presented in this paper corresponds to the conditions in February 1998, and, considering the fast development of companies which offer Web hosting and dial-up access, this situation is likely to change soon.

A General overview of Macedonian Web servers which offer web hosting

Currently, there are four commercial Internet providers which offer Web page hosting in Macedonia: Unet, the first Macedonian Internet provider (<http://www.unet.com.mk>), Macedonian Telecom's Internet Center (<http://www.mpt.com.mk>), the Internet Division of RSC Computers (<http://www.rsc.com.mk>), and MKInter (<http://www.mkinter.net>). In addition, the company Semos Multimedia (<http://www.smultimedia.com>) offers HTML design.

UNet is the oldest Macedonian Internet provider; as the company's home page points out: '20th of April 1995 is the Macedonian Internet access birthday. On that date ULTRA Computing established the first full Internet access in the Republic of Macedonia. The mentioned access was released with a help of BankNet, Hungary. VSAT equipment was placed on Skopje's international computer fair. The link speed was 19.6 kbps. In less than a month, we relocated our equipment and started with necessary tests and preparing for public Internet access. Four telephone lines was dedicated for dial-up access. Only two persons was engaged part-time in this very first moment. Today, UNet is a separate daughter company of Ultra and a well-recognized satellite communication provider. In the part for the Internet business, UNet covers more then 80% of brand name corporate Internet users. We are very gwell recognized in Macedonian ex-patriate community and we are also covering more then 80% of them."

According to the information given on their page, UNet offers the following services: Web design; Web hosting; Intranet solutions. UNet offers these Internet services: Dial-up access; Dial-up UUCP access; Leased-lines access; Sub-providing services; Private networks (VSAT technology), Step by Step manual (Macedonian and English versions); Web registration on major search machines; Web hosting (special discount prices for other countries); Domain

registration services; Alias services; Complete support for any Internet request.

In terms of human and technical resources, Macedonian Telecom's Internet Center is among the most powerful providers in Macedonia. According to their webmaster, they were established "on December, 7 1995. We have 8 CISCO routers -- 3 of them are CISCO 4700, 5 are CISCO 2500. Also, we have 3 Digital Alpha servers, Firewall SUN (Checkpoint Firewall 1), and 60 dial-up lines up to 33.6 kbps, and 30 ISDN lines up to 64 kbit/sec. We have a 2 Mbit/sec terrestrial link with British Telecom/Concert, and 256 Kbit/sec satellite link with Teleglobe. Also we have 128 Kbit/sec satellite link with MCI. We offer Dial-up Internet access, leased lines Internet access, ISDN Internet access and Web hosting."

MKInter is another company which offers Internet services. Their Web page explains that "MKInter was founded in October 1996, as a part of InterNet, a company for informatics and telecommunications. MKInter offers a wide range of connections to the Internet, including Dial-up and leased lines in a range of 33.6 to 128 Kbps. Also, MKInter offers Dial-up Services, Leased Line Services, Web Hosting, Web Advertising Network Security Services and Consulting & Training Services."

Finally, the youngest Internet provider in Macedonia is RSC Computing's Internet Division. According to their webmaster, they offer dial-up access at a speed of 28.8 bps, as well as Web hosting.

The main activity of Semos Multimedia is HTML design. According to their Webmaster, they offer HTML design, domain registration, Web hosting, Web page upgrades, five or more e-mail addresses, Web registration on major search engines, as well as complete Web page access statistics.

Costs

Web hosting in Macedonia is characterized by a wide price range, frequently accompanied by incomplete or imprecise price lists.

UNet is the only Internet provider which offers six-month free Web hosting to its users. This company charges a dial-up access membership fee of \$25 US for three months, \$35 US for six months, or \$50 US for one year. They also charge 3.6 cents (US) per minute of dial-up access. In terms of Web page hosting, UNet charges \$130 US for 1 MB annually, with \$70 US for each additional megabyte. UNet also offers free hosting for art projects, as well as cultural, educational and scientific institutions.

Macedonian Telecom's Internet Center's initial dial-up access fee is 1325 denars for three months (approx. \$23 US), 1855 denars for six months (approx. \$33 US), and 3180 denars (approx. \$55 US) per annum. One minute of Internet access via their server costs 2.2 denars (3.8 cents).

Thus, the two main competitors offer almost equal prices in terms of dial-up access. However, there are greater differences when it comes to page hosting. For example, the Internet Center of the Macedonian Telecom charges 3720 denars (approx. \$65 US)--per six months--for a 1 MB Web page, while each additional megabyte costs 1860 denars (approx. \$33 US). One year of Web page hosting would cost the user 5580 denars (approx. \$97 US)

for the first megabyte, and 2790 denars (approx. \$49 US) for every following one. However, the clients who have not subscribed to their Internet services would have to pay 7740 denars (approx. \$129 US) annually for the first megabyte, and an additional 3720 denars (or \$65 US) for each megabyte extra.

MKInter does not require a dial-up connection membership fee. Their Internet access charges are divided into two categories: personal dial (with one computer), and office dial (a LAN Internet connection). The prices range from 399 denars (approx. \$7 US) for five hours, to 6600 denars (approx. \$155 US) for 100 hours, for personal dialling, and from 597 denars (approx. \$11 US) to 47,100 denars (approx. \$816 US) for 500 hours of office dialling.

MKInter offers three categories of Web hosting. The most basic one, 'simple presence,' costs \$35 US monthly, plus \$4 US for each megabyte. The URL has the following syntax: <http://www.mkinter.net/business/company>. A more advanced category is 'company presence,' providing the user with an address in the form 'company.com.mk,' which costs \$199 US monthly, plus \$4 US for each additional megabyte. Finally, the 'commercial presence' costs \$1,999 US and includes server hosting. This company offers one of the most detailed --and expensive -- Web design price lists. For typical HTML page design, the cost is \$28 US per page, plus \$4 US (per image) for scanning images or slides. MKInter charges \$5.60 US (per one A4 format page) for text typing, correction and phrasal enhancement. The user should also pay \$80 US for advanced statistical data (hits, users, impressions, etc.), while the cost for Java scripts and applets, ActiveX, Visual Basic scripts, VRML, 3D and dynamic page content varies depending on the contents of the page.

Finally, RSC Computers offers a fairly low monthly subscription fee of 650 denars (about \$12 US), whereas the subscription fee for unlimited access is 6000 denars (about \$104 US). They also supply the possibility of Web page hosting; the subscription fees range from a one-hour lease (108 denars or approx. \$1.87 US) up to 120 hours (7080 denars or approx. \$123 US). In addition to the initial fee, RSC Computers charge 500 denars (approx. \$9 US) for one Web page, 350 denars per page (approx. \$6 US) if the total number of pages does not exceed three, 260 denars per page (approx. \$4.50 US) for less than five pages, 200 denars per page (approx. \$3.4 US) for less than 10 pages, and 160 denars per page (approx. \$2.70 US), if the total number of pages does not exceed 20.

As pointed out previously, Semos Multimedia links Web hosting with HTML design, offering both services in a package. The shortest possible time period for such a deal is three months, at \$99 US per month. The package includes 7 Web pages, five e-mail addresses, Web server space, domain registration, etc. A six-month deal costs \$179 US, comprising services such as 15 Web pages, 7 e-mail addresses, as well as Web server space. Finally, a \$249 deal includes more than 30 pages, 10 e-mail addresses, Web server space, domain registration, etc.

A project

I will illustrate the financial aspects of Web publishing through the home page of Mi-An Publishing. This site offers introductory information about *The Macedonian Times* (a news magazine published by Mi-An Publishing) with a selection of several articles from each issue, as well as a presentation of the book *Macedonia Yesterday and Today*, with the possibility of on-line reading. Furthermore, the page gives some basic information about Mi-An Publishing, several forms for user feedback and a few Java scripts. The site is mostly text-oriented, as its

graphic contents have been brought to the lowest possible level. The size of the entire site is about 700 KB, including 44 HTML pages and 21 image files. Following is a comparative analysis for a 12-month period, only for Web hosting:

Provider	Memb'ship US\$	Hosting US\$	Extra US\$	Final cost US\$
UNet	0	130	0	130
Internet centar of MT (for their customers)	55	97	0	152
Internet centar of MT (others)	0	129	0	129
MKInter (simple presence)	0	35 x 12 months	4 (per megabyte) x 12 months	468
MKInter (company presence)	0	199 x 12 months	4 (per megabyte) x 12 months	2436
MKInter (commercial presence)	0	1199	0	1199
RSC Computing	48	122 (2.77 per page for more than 20 pages)	0	170
Semos multimedia (hosting and HTML creation)	0	249 x 12 months	0	2988

For a better overview of the relation of these prices to the economic power of the consumers, it is useful to compare them with the average net wage (according to the Macedonian Bureau of Statistics, it amounts to 9155 denars, or \$159 US):

Provider	The final cost as a percentage of the average net wage
UNet	82%
Internet centar of MT (for their customers)	96%
Internet centar of MT (others)	81%
MKInter (simple presence)	294%
MKInter (company presence)	1532%
MKInter (commercial presence)	754%
RSC Computing	107%
Semos multimedia (hosting and HTML creation)	1879%

HTML design, education, copyright

The aforementioned prices do not include the costs of HTML code creation. The two main Internet providers, UNet and Macedonian Telecom, often offer free HTML design for their users. Thus, their price catalogs do not enlist the expenses for HTML creation. This policy -- together with the high technical standards and relatively cheap dial-up access -- contributes to the competitiveness of these two providers on the Macedonian market. Their tied race for domination of the Macedonian market is manifested by the prices of the other services, which do not differ greatly.

If the user decides to create his/her own HTML code, he/she should think of additional costs, such as education and software expenses. Out of the numerous specialized computer education firms in Macedonia, only a few provide HTML editing courses. Such classes are not held regularly, and thus it is hard to define a fixed rate. An estimate of the costs for this type of education could range anywhere between 200 and 300 \$US. Finally, one should also consider the numerous on-line HTML courses, accessible through the World Wide Web.

As far as software is concerned, the author's research rates Netscape, MS Front Page, Adobe Page Mill, as well as some freeware and shareware HTML editors as the most popular. Several utility programs are also used, especially if they are accessible through the Internet as freeware or shareware. In terms of software expenses, it is very difficult to give any kind of an estimation; Macedonia is among those transitional economies which face major copyright problems. Despite the fact that the larger and more powerful companies purchase legal software, most private users and smaller businesses use pirated versions. The home page of Mi-An Publishing has been designed with Netscape Gold 3.01 and MS Windows Notepad.

Commercial Use, Advertising and Marketing

The commercial use of Internet sites in Macedonia is minimal. Except for the Internet providers, there are practically no sites which offer the purchasing of services or goods. On-line shopping--so typical of the Internet--is completely absent. Even the companies whose sites could bring on-line commerce profits do not offer the possibility of on-line data or shopping (e.g. Skopje Airport, the Macedonian Stock Exchange, the Hyundai representative in Macedonia, etc.).

The use of Internet advertising as a source of income is also very low. Only a few sites (generally those of the Internet providers themselves) have sponsor banners, mostly from Macedonian hardware companies. The reason for this attitude towards Internet advertising may lie in the companies' ignorance of the possibilities offered by Web advertising. Contributing to this is the small Internet consumer base, in comparison to the other media (press, radio, television), as well as the general economic situation in the country. The successful companies direct their products to the domestic market, whose size is insufficient to cover a large marketing campaign. Thus, it is more profitable to advertise the product on the 'classic' media rather than the Internet, where -- although the costs are lower -- the entire consumer group will not be covered.

In summary, the Macedonian Internet user has a relatively wide choice in terms of price and quality