



United Nations
Economic and Social Commission for Western Asia (ESCWA)

**NATIONAL PROFILE FOR
THE INFORMATION SOCIETY IN LEBANON**

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This document presents a profile of the information society in Lebanon. In this respect, Lebanon adopted an e-government strategy document, in 2002, and a National e-Strategy in 2003; work is currently underway in finalizing the plan of action for implementing the National e-Strategy. The Lebanese Government and the private sector are actively participating in the World Summit on the Information Society (WSIS) process, and national working groups have been set up to follow up on activities related to the second phase of the WSIS. Three Government agencies, namely the Ministry of Telecommunications, the Minister of State for Administrative Reform (OMSAR), and the Ministry of Economy and Trade, are heavily involved in building the Lebanese information society.

1. *Policies and Strategies*

National information society policies and strategies

In October 2003, the Lebanese Government, through United Nations Development Programme (UNDP) and Office of the Minister of State for Administrative Reform (OMSAR), completed the development of a National e-Strategy. The vision adopted in this documents “is to move the economy and society of Lebanon towards a Knowledge Based Society in the shortest possible time while at the same time addressing related challenges and opportunities that Lebanon is facing”¹. Thirty-two policies, grouped under seven initiatives², are proposed as vehicles for instating the National e-Strategy. Under the same project, a National e-Strategy portal site (www.e-gateway.gov.lb) was designed and developed to incorporate all information and data pertaining to national e-initiatives and the information society.

Sectoral plans for building the information society

In respect to the above, sectoral plans for building the information society were drafted in 2004. By the end of May 2005, working meetings to discuss the implementation plan would be conducted with experts from the respective sectors. The implementation plan includes a number of projects grouped by programmes. The plan also includes priority national projects. The latter simply refer to projects where special focus and efforts should be put towards getting them implemented. The implementation plan is expected to be launching during the summer of 2005.

An increasing number of ICT community centres were implemented in various areas of Lebanon during the last two years. These centres provide access to the Internet and deliver training in basic ICT skills. Most of these centres are initiated by the private sector and by local NGOs³. The most widely spread initiative is the PiPOP, which is short for PCA Internet Point of Presence. Developed to address the “digital divide” in the Lebanese society, the PiPOP initiative has, as of January 2005, 30 centres⁴ around Lebanon, extending from the Metn to the Chouf Mountains and down to major South Lebanon villages.

Involvement of WSIS objectives

Lebanon was represented at phase 1 of the World Summit on the Information Society (WSIS) held in Geneva from 10-12 December 2003. Lebanon has a National Working Group for the WSIS (NWGWSIS), which meets on regular basis to discuss relevant issues pertaining to the WSIS objectives as well as to discuss and follow up the activities of the Council of Arab Telecommunications and Information Ministers. Two additional working groups are dedicated to look into financing schemes for building the information society and to discuss the issues related to Internet Governance. The NWGWSIS is the result of collaboration

¹ Source: National eStrategy for Lebanon, executive summary, page 1

² <http://msib.omsar.gov.lb/Cultures/en-US/Publications/Strategies/National+eStrategy.htm>

³ Refer to <http://www.escwa.org.lb/mtecpr/> for a listing of these projects in Lebanon.

⁴ Interview conducted with Mr. Nizar Zakka, director of PCA, on Monday 14th of February, 2005.

of three ministries in Lebanon, namely the Ministry of Telecommunications, OMSAR, and the Ministry of Economy and Trade.

Progress towards fulfilment of national policies and strategies

Due to the events that occurred in Lebanon in February 2005, progress of work for finalizing and adopting the plan of action for implementing the National e-Strategy has been delayed. However, The implementation plan is expected to launch during the summer of 2005.

2. Legal and regulatory frameworks

National Intellectual Property Rights, Privacy status and status of Freedom of Expression

Lebanon has a trademark, patent, and copyright laws. Despite enacting a law to protect ownership of content in its various forms in 1999, national intellectual property rights is still not fully enforced in Lebanon. However, the Ministry of Economy and Trade developed a site that contains vital information on IPR (refer to <http://www.economy.gov.lb/>). In a recent survey conducted in summer 2004 by SRI international and sponsored by PCA (local ICT NGO), the report titled “Patterns of ICT Usage in Lebanon” reveals that 65% of software products used by home computer users are pirated products, 31 % are original products, and 3% use both mix original and copies of software⁵. Whereas, use of pirated products by the business sector is low; 74% always buy original, 24% sometimes buy copies, and 2% always buy copies⁶.

Telecom regulatory framework in the country

The Government of Lebanon has adopted a telecommunications policy that aims at transforming the telecommunications sector in Lebanon to a competitive market. There is still no Telecommunications Regulatory Authority in Lebanon. More efforts are needed towards tariff rebalancing, increasing international capacity, preparing decrees for downstream, regulating WIFI usage, regulating Teleport project, and reducing telecommunications costs (including providing incentives to ISP to reduce Internet fees).

Regulating the Internet

ISP, data communications, and paging are totally privatised. There are still no national regulations governing the Internet sector to date. However, the national ISP have been coordinating together to maintain adequate cost-performance services, lately they introduced the option of having wireless Internet connection to end-users.

Privacy and security laws and regulations for applications

On January 2004, the Lebanese government, through the Ministry of Economy and Trade, has embarked on a project, known as ECOMLEB Project, and which aims at assisting in developing the appropriate legal and regulatory framework for all types of e-transaction, including privacy and security laws, as well as assisting the development of e-commerce in Lebanon. Work on this project should be completed by the fourth quarter of 2005; however, the decree for passing the law is still needed.

Other ICT-related laws and regulations

On January 27th 2003, the OMSAR announced the issuance of a guidebook for "ICT Good practices" in IT and communication⁷. In addition, OMSAR published another document titled “ICT standards and Guidelines” in June 2003⁸.

⁵ Patterns of ICT Usage in Lebanon, SRI International, page 26, <http://www.pca.org.lb/Events.asp?catid=38>

⁶ Ibid, page 35

⁷ <http://msib.omsar.gov.lb/Cultures/en-US/Publications/Guides/ICTGPG.htm>

⁸ www.omsar.gov.lb/ICTSG/.

3. ICT infrastructure

Telephone penetration

During the last two years, the MOT has disseminated throughout the Lebanese territory public telephone booths, that function by means of prepaid telephone cards. Table 1 provides a listing of major indicators for fixed and mobile telephony for Lebanon as of 2003.

There are two mobile operators in Lebanon. In 2004, Detecon International of Germany and MTC of Kuwait to manage the existing mobile licenses have won two new contracts; the first was named Alpha and replaced Cellis, the second was named MTC Touch and replaced Libancell.

Table 1. Fixed and mobile telephony indicators for Lebanon (2003-2004)

	2003	2004
Main telephone lines in operation	700,000	704,000
Main telephone lines in operation per 100	15.75	15.64
Cellular mobile subscribers (K)	800,000	900,000
Cellular mobile subscribers per 100	17.78	20.00

Source: Madar Research Group

Internet backbone

Lebanon still does not have Public Data Network (PDN). Table 2 provides a listing of major Internet backbone indicators for Lebanon for 2003.

Table 2. Internet backbone indicators for Lebanon (2003)

Leased lines subscribers (K)	7.6
Initial cost [Leased Lines] (US \$)	667
Monthly charge [Leased Lines] (US \$)	200
ISDN subscribers (K)	0.92
Initial cost [ISDN] (US \$)	551
Monthly charge [ISDN] (US \$)	37 ⁽¹⁾

Notes: (1) Value ranges between 37\$ and 42\$

Source: ICT Indicator database ESCWA, ICTD

ISPs and ASPs

Overall, the quality of service of ISP in Lebanon is good; however, Internet fees are still relatively high in Lebanon as compared to other countries in the ESCWA region. Table 3 provides a listing of major ISP indicators for Lebanon for the years 2002 and 2003.

Access

According to decree 8804 dated 10/10/2002⁹, the following Web site provides the new fixed rates for Internet dial-up users which are applicable starting 1/2/2003: http://www.informs.gov.lb/EN/Main/Internet_Rates.asp? In addition, more economical access to dial-up connection is provided through the use of 4-digit numbers, particularly when access is more than 10 hours per month. The automatic charge for using the 4-digit numbers is 19.000 LBP. For heavy users, (>150 hrs/month), it is better to use an analog leased line. ISDN dial up services are subject to the same reduced rates as mentioned above.

⁹ http://www.informs.gov.lb/EN/Main/Internet_Rates.asp?

Table 3. ISP indicators for Lebanon (2002, 2003)

	2002	2003
ISPs	14	...
ISP monthly charges (US \$)	18	...
Internet hosts	7199	7552
Internet hosts per 10,000	21.05	21.58
Internet subscribers (K)	150	175
Internet subscribers per 10,000	438.6	500
Internet users (K)	460	525
Internet users per 10,000	1345.03	1500
International Internet bandwidth per 100	17.6	...
Hosting availability	Yes	Yes

Source: ICT Indicator database ESCWA, ICTD

4. ICT Capacity-Building

Awareness and dissemination

OMSAR has completed the first phase of an ICT training plan for Ministries' and public agencies' employees. As such, 2500 employees, from almost all public administrations and agencies, were trained as ICT end users and ICT advanced users based on a defined and agreed methodology. The second phase of this project is already launched and will be completed towards the end of 2005. Capacity building of civil servant is an on-going process, and OMSAR will continue launching similar project as long as there is budget allocated to support these activities. In addition the Lebanese organization Professional Computer Association (PCA) is spearheading an initiative that aims at producing affordable personal computer (PC) with a view to increase access to information and PC penetration rate in Lebanon. The estimated price range of a PC, including Microsoft operating system and office license, ranges from 400 to 500 USD.

Computers in schools

The majority, if not all, private schools in Lebanon have computer laboratories for their students and use computers for administrative tasks. Based on a report released by Council for Development and Reconstruction (CDR) and dated July 2004, all public schools (1284 primary, intermediate, and secondary) were rehabilitated¹⁰. Based on the needs assessment conducted by the Ministry of Education and Higher Education, CDR launched a bid for supplying 5,000 computers and their peripherals to public schools and other bids for supplying the necessary equipment for the laboratories of 250 intermediate and secondary schools; implementation of these projects started in August 2003¹¹. In addition to the above, the UNESCO Office in Beirut, through its "Bridging the Digital Divide" project, recently distributed more than 130 refurbished personal computers to 21 schools in the Northern Lebanon, in cooperation with a local NGO. However, the Lebanese education curriculum still needs to be amended to formally incorporate ICT in education and to necessitate the development of the teachers ICT capabilities.

Vocational training

There are three main types of institutions for delivering vocational education in Lebanon: technical schools, vocational high schools, and technical institutes. In some cases some colleges and rehabilitation centres provide vocational training. Most vocational institutions deliver their training in Arabic and some of them provide ICT training. Technical schools amount to a total of 59 of which 38 are French, 20 are English and 1 is German; vocational high schools, in Lebanon, amount to 11 (7 English and 4 French); and there are

¹⁰ Council for Development and Reconstruction, 2004 report, <http://www.cdr.gov.lb/indexe.html>

¹¹ Ibid

18 institutes in Lebanon¹². In addition, there are various private companies that provide ICT training and certification in Lebanon.

University education

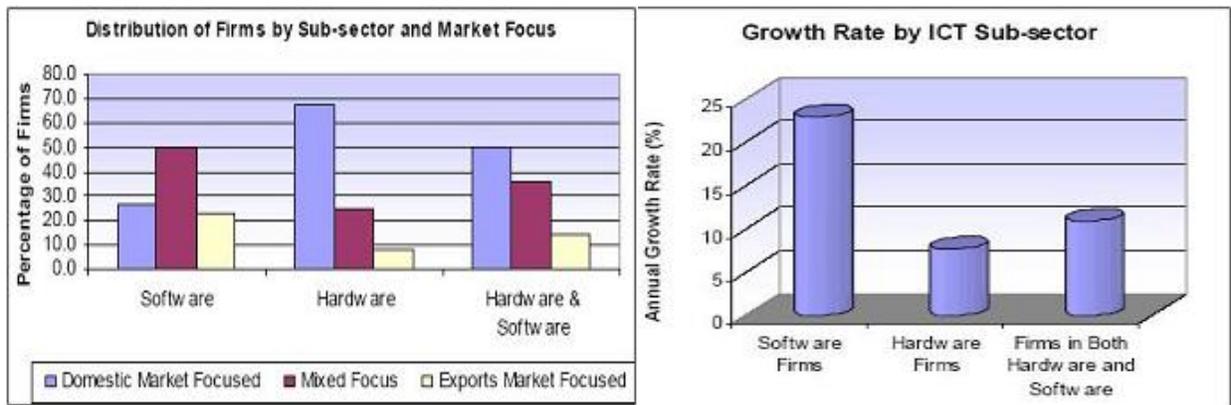
Lebanon has a total of 43 licensed private universities and one public university, namely the Lebanese University; an increasing number of these universities provide ICT related programmes. It is estimated that the total number of enrolled university students is around 130,000 out of which 14,000 graduates per year¹³. The estimated number of postgraduate students, which includes masters and doctoral studies, is around 3,500 and 4000¹⁴.

5. Building the ICT sector

ICT firms

The following compilation of figures depicts the many positive indicators of the ICT sector development in Lebanon. Efforts are still required to enable this sector to progress towards achieving regional leadership.

Figure 1. ICT sector in Lebanon (2003)



Source: Presentation titled "ICT Week 2004: ICT outlook in Lebanon", Ministry of Telecommunications.

Furthermore, the Association of Lebanese Software Industry (ALSI) launched the first "Software Industry Strategy" for Lebanon, on February 2003¹⁵. ALSI signed an MOU with the Swiss Interactive Media and Software Association (SIMSA), on December 2003¹⁶.

Investment in ICTs

Figure 2 provides ownership and capital structure of ICT firms in Lebanon as well as the distribution of employment by firm size and by sub-sector.

¹² <http://csrd.lau.edu.lb/Publications/StudentReports/Education%20in%20Lebanon.htm>

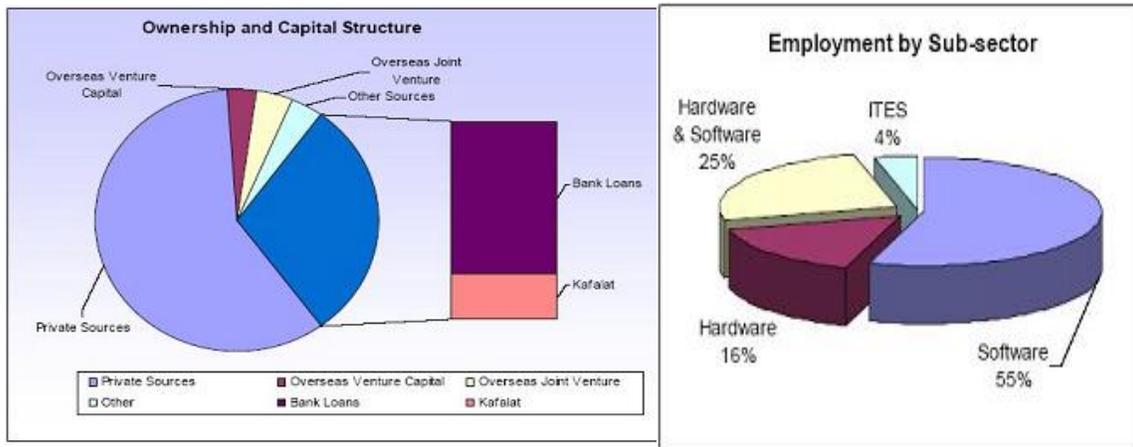
¹³ Presentation "R&D potentials in ICT: Case of Lebanon", Hassan Diab, American University of Beirut, November 2003.

¹⁴ Ibid

¹⁵ <http://www.alsilebanon.org/EventReport.asp?LinkedTo=12>

¹⁶ <http://www.alsilebanon.org/News.asp>

Figure 2. Investment and employment in the ICT sector (2003)



Source: Presentation titled “ICT Week 2004: ICT outlook in Lebanon”, Ministry of Telecommunications.

Government facilitation

No major changes occurred in this respect the Lebanese Government eliminated customs tariffs on all ICT products in 2000 and introduced a value-added tax of 10% on products in 2002; thus counter balancing the tariff elimination. Figure 3 provides the percentage of firms reporting export leads by geographic markets.

Figure 3. Geographic markets for Lebanese ICT Firms (2003)



Source: Presentation titled “ICT Week 2004: ICT outlook in Lebanon”, Ministry of Telecommunications.

7. Applications in government establishments

Computerization of public administration

With an e-government readiness index of 0.424, Lebanon’s international e-government readiness rank is 69¹⁷. Most ministries have a Web site, even though the latter are in most cases informative in nature and provide little interactions with citizens. All government ministries and agencies have installed a Local Area Network (LAN).

¹⁷ World public sector report 2003: e-government at the crossroads, United Nations Department of Economic and Social Affairs, ST/ESA/PAD/SER.E/49, page 189

Digitization of information

On 21 January 2002, OMSAR launched a one-stop information shop consisting of two parts: a phone help line (1700) and an Internet website www.informs.gov.lb. Currently, a project is underway to develop a full fledged e-government portal.

e-government plans

In December 2002, the e-government strategy document, produced by OMSAR and which provides a comprehensive strategy for the realization of a Lebanese e-government initiative, was submitted to the Ministerial ICT Committee and approved.

e-procurement applications

The Government has not implemented an e-procurement application; however, the National e-Strategy track on e-government includes a priority project for developing and implementing a centralized government e-procurement application.

Computerization of customs processing

Lebanon has finalized a complete roll out of the Automated System for Customs Data (ASYCUDA, also known as NAJM) in Lebanon. In addition, NAJM express, which allows the releasing of goods on manifest information only, is provided to beneficiaries of this service for an extra fee. An upgraded Web-enabled version of NAJM, referred to as NAJM Online Operation (NOOR), allows trader or customs broker to track declarations on the Internet. The implementation of NAJM/NAJM Express/NOOR, combined with the tariff reform, the streamlining of procedures and harmonization with international standards, enabled the Lebanese customs to reduce the number of stages involved in customs clearance from 13 to five steps¹⁸.

Computerization of taxation and revenue management systems

The Ministry of Finance (MoF) is the most automated among all Lebanese ministries. All procedures are streamlined and supported by proper applications. Currently, the MoF is developing a Web-based tax filling form application.

8. Applications in education

e-learning

iEARN-Lebanon, is a group of educators who believe that project-based learning, integration of technology and online collaboration can enhance teaching and learning. In this respect, iEARN-Lebanon has got the first Arabic Online Learning Circle course, which is a highly interactive, project-based partnerships among a small number of schools located throughout the world, up and running with teachers from Yemen, Lebanon, Egypt, Jordan and Malaysia¹⁹.

e-school projects

SchoolNet Lebanon is a project that aims at interconnecting all public / private schools and available libraries with the Ministry of National Education over a state-of-the-art telecommunications infrastructure with a gateway to the global Internet and supported by the latest information and communications technologies.

Virtual universities

There are plans to launch virtual universities in Lebanon; however, none is implemented so far.

¹⁸ Trade and transport facilitation: E-business and ICT applications, ESCWA, E/ESCWA/ICTD/2003/8, pages 54-55

¹⁹ <http://iearnlb.org/m/>

9. Applications in Commerce and Business

Extent and maturity of e-commerce and e-business applications

Although Lebanon has relatively high levels of computer penetration and reasonable degree of Internet usage, e-commerce is still not widely spread; in fact, only 9% of all Lebanese Internet users shopped online²⁰. 75% of users use the credits cards as mode of payment for Internet shopping²¹. Moreover, the Chamber of Commerce, Industry and Agriculture of Beirut and Mount Lebanon, with the cooperation of GlobalSign Lebanon, offers digital certificates to serve Lebanese companies and enterprises. In August 2003, Tejari, a UAE based B2B online marketplace serving e-procurement services, was launched in Lebanon²².

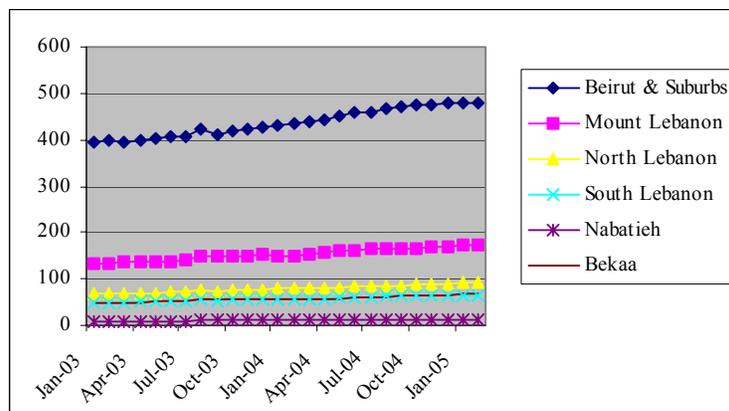
Availability and quality of e-banking

The Secure Banking and Information for Lebanon (SeBIL) project launched by the Central Bank (BDL) introduces e-Payments and Public Key Infrastructure technology. SeBIL shall provide the secure platform required for electronic banking and e-services for Lebanon's financial sector. It will also empower Lebanon to play a major regional role in the Middle East as a provider e-services including e-Commerce, e-Banking and e-financial services.

Maturity of regional ATM and banking networks

Figure 4 and 5 illustrate the distribution of ATM by geographic locations in Lebanon and the number of cardholders respectively from Jan 2003 till January 2005.

Figure 4. Geographical Distribution of ATM



Source: BDL, www.bdl.gov.lb/edata/elements.asp?Table=t515-1

Maturity of Bank to Bank financial transfer system

Checks in Lebanese pounds and in foreign currencies (USD, GBP, and Euro) are cleared through a single system, the BDL Clearing Houses. These are established at the BDL's head office in Beirut and at six of its nine branches, namely in Jounieh, Tripoli, Zahlé, Saida, Tyre and Nabatyeh. On the other hand, payment transactions are settled primarily by the BDL over the accounts kept with it by members of the banking and financial sectors. The BDL is the country's major payment system operator, executing payment orders directly over its books and processing nearly all the interbank clearings. Cross-border payments in foreign currencies are processed through the Foreign Exchange and International Operations Department at the BDL²³.

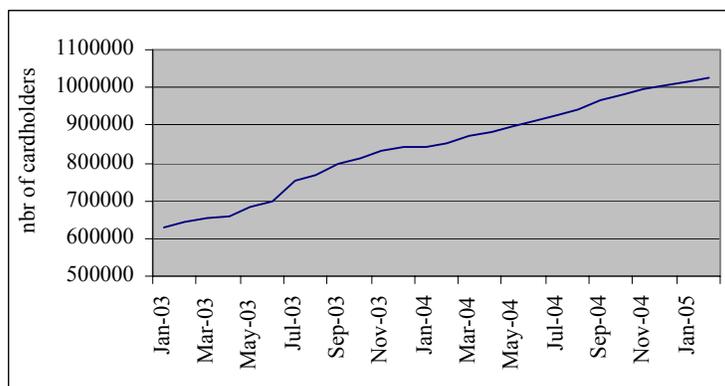
²⁰ Patterns of ICT Usage in Lebanon, SRI International, page 23, <http://www.pca.org.lb/Events.asp?catid=38>

²¹ Ibid, page 24

²² Paul Budde Communications Pty Ltd, 2004 Telecoms in Middle East, Lebanon, page 89

²³ <http://www.bdl.gov.lb/paysys/Interbank.htm>

Figure 5. Number of cardholders in Lebanon



Source: BDL, www.bdl.gov.lb/edata/elementsXLS.asp?Table=t515-2

10. Applications in Healthcare

Databases for national healthcare

As a result of recent developments in the field of prevention, cure and care, the Ministry of Public Health (MoPH) has experienced a significant increase in its administration, capability and programs. This evolution has been paralleled by changes in the laws and regulations that define its role and intervention. Since 2002, the MoPH's Website provides a number of vital information to the citizens such as hospital accreditations, prevention programmes, health care information, and health care centres²⁴.

In addition, a health care portal www.toubibonline.com provides health information including a doctor's directory for five ESCWA member countries, namely, Bahrain, Jordan, Lebanon, Saudi Arabia, and United Arab Emirates.

Telemedicine and medical use of teleconferencing

Telemedicine and medical use of teleconferencing are mostly available in the private hospitals in Lebanon. Additionally, the Clemenceau Medical Centre, an affiliate of the famous Johns Hopkins International hospital group, is opening in Beirut and will also provide telemedicine services²⁵.

Maturity and implementation of Health Care Information Technology Systems

The Ministry of Health equipped a centre at their premises designated for processing health professions licensing. This one stop shop will allow all healthcare professionals to apply and obtain licenses to practice their respective professions with great ease and comfort²⁶. OMSAR is also working on further automating the Ministry. On the other hand, the majority of private hospitals in Lebanon have implemented health care information technology systems.

11. Digital Arabic Content

Arabic vs. English content on the Web for national use

English is the primary language for home computer users in Lebanon with Arabic following as the second most frequently used language. Based on a report produced by SRI International, corporate ICT users use more Arabic software applications than home computer users. All major Arabic newspapers, such as

²⁴ <http://www.public-health.gov.lb/ind.shtml>

²⁵ <http://www.ameinfo.com/45616.html>

²⁶ www.omsar.gov.lb

Annahar, Assafir, Alhayat, alMustaqbal, and Al Balad, published in Lebanon are now appearing on the Web with free access. In addition, ISPs have set up their own portals, which provide a variety of topics. The main Lebanese television stations are now present on the web with integral retransmission of their daily news.

Local creation of software products in Arabic

The software industry in Lebanon is growing. The majority of firms provide custom-made software with multilingual interface, including Arabic, for a variety of applications, such as banking, accounting, human resources, and sales force automation. There are also other firms that are specialized in developing computer-based training applications in Arabic.