



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

**NATIONAL PROFILE FOR
THE INFORMATION SOCIETY IN SAUDI ARABIA**

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NATIONAL PROFILE FOR THE INFORMATION SOCIETY IN SAUDI ARABIA

In the recent years, the government of Saudi Arabia, acknowledging the vital role of Information and Communication Technology (ICT) for socio-economic development, has been actively promoting ICT in order to keep abreast with the information era.

1. Policies and Strategies

National information society policies and strategies

The government of Saudi Arabia formulated the seventh five-year development plan, which includes a clear vision of the role of ICT and envisages a national plan for the use of ICT for scientific and economic development.

Sectoral plans for building the information society

The King City for Science and Technology (KACST) and the Ministry of Planning developed the National Plan for Science and Technology. This long-term plan (2000 to 2020) consists of seven general objectives and a number of implementation policies¹.

Involvement of WSIS objectives

Moreover, Saudi Arabia is actively involved in the WSIS process including ESCWA Regional Preparatory Conference hosted in Damascus 2004.

Progress towards fulfilment of national policies and strategies

Despite the existence of national policies and strategies that aim to create information society in the kingdom, observers and Saudi officials believe that there is resistance to change among Internet community leaders thus slowing down the pace of progress. Table 1 lists some of the projects currently underway.

Table 1. Saudi e-Government Project Undertaken

Project Name	Project Type	Owner Organization	Project Details
SADAD: E-Payments Systems Projects	Electronic Services	Saudi Arabian Monetary Agency	The Saudi Arabian Monetary Agency is executing the e-Payments Project known as "SADAD". The project currently focuses on G2B & B2B transactions. Project completion is expected by early 2005. This project is one of the major requirements for the implementation of e-Government and e-Trade.
E-Government Project in Almadinah Almunawwarah	Electronic Services	Municipality of Almadinah Almunawwarah	The Municipality of Almadinah Almunawwarah is making strong efforts to implement e-Government. A special portal for Almadinah Almunawwarah was developed for the purpose of introducing services to individuals and the business sector. Additionally, government organizations are enhancing their eligibility to qualify for e-Government implementation. The portal can be accessed by visiting www.almadinah.gov.sa
Electronic Data Interchange,	Infrastructure	Ministry of Finance	The Public Investments Fund of the Ministry of Finance is currently executing the Saudi

¹ <http://www.mcit.gov.sa/home.asp?l=EN&p=8>

International Trade Sector			Electronic Data Interchange (SaudiEDI) Project aims at providing speed and transparency to the processing of business transactions. Focus is made on the international trade sector (import/export services e-Trade) in Saudi Arabia. The project will enable electronic flow of information on the “manifest, delivery notes, import & export statements” between the concerned parties such as the Customs Department, the General Organization of Ports, cargo agents, customs clearance agents as well as others related to this process.
Omrah Project	Electronic Services	Ministry of Hajj	This project aims at organizing the process of issuing Omrah visas electronically. Electronic visa applications are submitted via the Internet to Omrah agents abroad. These applications are electronically processed by the Ministries of Hajj, Foreign Affairs and Interior. Visas are consequently issued within 24 hours. This system is currently in use.
Services Portal Project	Electronic Services	Ministry of Interior	The National Information Center (NIC) of the Ministry of Interior is building a portal for services offered to individuals. The portal will enable such individuals to obtain information on these services, i.e., requirements, relevant e-forms, and the possibility of providing twenty services electronically. The project also includes setting up around 100 electronic kiosks.
Smart Card Project	Electronic Services	Ministry of Interior	The ministry is implementing a Smart Card Project which will replace the traditional Civil Affairs I.D. with a smart ID. In later stages, the project aims at integrating into one card some of the other government cards such as the driving license and family card. There is also the electronic passport application which is considered a state-of-the-art technology solution worldwide.

Source: Saudi e-Government Program (www.egov.gov.sa)

2. Legal and regulatory frameworks

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

A new copyright law, put in place in March 2004 is a positive move towards a more transparent administration and judicial systems for Saudi Arabia. However, the law still fails to meet some basic standards of the TRIPS Agreement and the standards set by the two WIPO “digital” treaties, namely WCT and WPPT². Table 2 presents global ICT related treaties and national legislation.

² International intellectual property alliance, 2005 special 301 report, Saudi Arabia, executive summary

Table 2. Other ICT related legislation and treaties in Saudi Arabia

Legislation & Treaties	Status, by Mid 2004
Global Treaties	
World Trade Organization (WTO)	Accession
Paris Convention	Pending
WIPO Copyright Treaties (WCT)	
Berne Convention	Pending
National Legislations	
Copyright Law	In effect (2003)
Trademark Law	In effect (1984)
Patent Law	In effect (1989)

Source: World Trade Organization & Madar Research.

Telecom regulatory framework in the country

Saudi Telecom Company (STC) has a monopoly on all services except providing Internet services and VSAT (refer to table 3 for Saudi telecommunications market structure). Telecommunications market is expected to open up for competition by 2006. The Communications and Information Technology Commission (CITC), is Saudi Arabia's telecommunications regulator. CITC opened the telecommunications market for competition and started the partial liberalization of the mobile telephone in the last quarter of 2004, while fixed telephone plan to do the same in 2008³. As a result, a new license was awarded, in December 2004, to Emirates Telecommunication Corporation (Etisalat) to provide GSM services in Saudi Arabia⁴.

Table 3. Saudi Telecommunications Market Structure

Type	Market Structure	No. of Operators	Operators	Comments
Fixed	Monopoly	1	Saudi Telecom Company (STC)	<ul style="list-style-type: none"> ▪ 30% of STC shares sold (2002) ▪ Sector to be liberalized by 2006
Mobile	Duopoly	2	STC, Ettihad Etisalat (Mobily)	<ul style="list-style-type: none"> ▪ Second license valid for 25 years ▪ License for 3G ▪ Additional mobile licenses not considered before Q4 2006
Data	Competition	3	STC, Bayanat Al Oula, ITC	<ul style="list-style-type: none"> ▪ Licenses allow provision of data communications services on the national level including international gateway
VSAT	Competition	5	STC, Al Harbi, Saudi International Telecom and Electronics, High Capabilities Technologies Co., Detecon Al Saudia	<ul style="list-style-type: none"> ▪ October 5, 2003: Granting of 4 VSAT licenses in addition to STC
Internet	Competition	23	23 Licensed ISPs	<ul style="list-style-type: none"> ▪ Requires Class B licenses

Source: Communications & information Technology Commission, Saudi Arabia

³ <http://www.citc.gov.sa/CITC/EN/AboutUs/background/?sm=1>

⁴ <http://www.citc.gov.sa/CITC/EN/Licensing/Licensees/?sm=8>

Regulating the Internet

Internet provision is already liberalized⁵. The Saudi Network Information Centre (SaudiNIC) at King Abdul Aziz City for Science and technology is the registration authority of the Top-Level Domain (ccTLD) name space and second-level domains of Saudi Arabia (".sa"). Refer to 106 for a listing of total registered domain names as of January 2003⁶.

Table 4. Listing of total registered domain names (Jan 2003)

Domain name type	Total registered
com	4017
gov	305
org	236
edu	116
net	98
sch	86
med	53

Source: ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 9

The Internet market was initially regulated by two departments located in King Abdulaziz City for Science & Technology (KACST) – the Internet Services Unit (ISU), which regulates the provision of Internet Services, and the Saudi Network Information Center (SaudiNIC) which is in charge of administering the domain name space under (.sa) and is responsible for allocating blocks of IP addresses to universities and local ISPs in Saudi Arabia. However, in 2002, the regulatory aspects of the Internet (such as the issuance, renewal, and cancellation of Internet licenses) were transferred to the Communications and Information Technology Commission (CITC), while the ISU continued to oversee the operational aspects.

The CITC is responsible for tariff regulation. The commission is also required to ensure that interconnection and other access charges imposed by STC comply with the Interconnection Guidelines including any pricing, costing and cost separation guidelines set out therein.

Privacy and security laws and regulations for applications

The government has invested heavily in security systems to control access to Websites deemed to be offensive, including restricting access to sites criticizing the Saudi government⁷.

4. ICT infrastructure

Telephone penetration

In 2004, Saudi telecommunications revenues reached USD 8.13 billion with a net profit of USD 2.48 billion. Fixed line penetration rate remained at 16% while cellular penetration rate reached 41%⁸ by the end of 2004. Saudi Telecom Company (STC) is currently the only cellular provider in Saudi Arabia. A second GSM service, Mobily's is expected to be launched around June 2005. STC currently has 3.7 million fixed line subscribers and 9.2 million cellular subscribers in 2004 (refer to figure 34)⁹. Multimedia Messaging

⁵ Paul Budde Communications Pty Ltd, 2004 Telecoms in Middle East, Saudi Arabia, page 116

⁶ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003.

⁷ Paul Budde Communications Pty Ltd, 2004 Telecoms in Middle East, Saudi Arabia, page 121

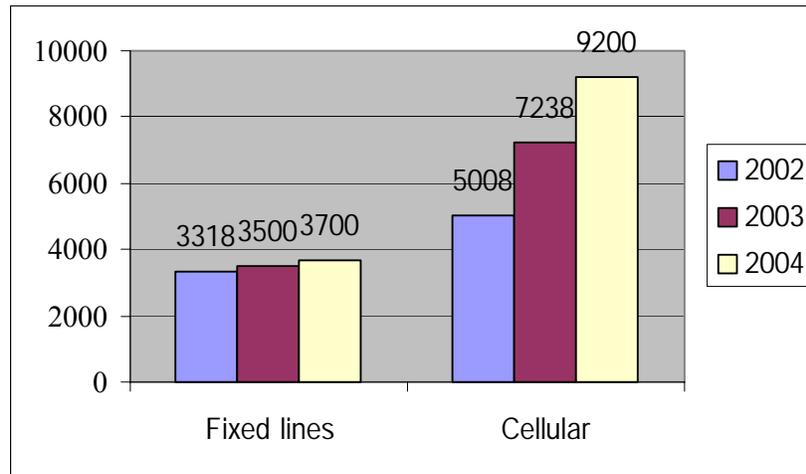
⁸ *Source:* CITC, Saudi Arabia

⁹ Arab Advisors Group Strategic Research Service, On the threshold of competition: an analytical look at the Saudi Telecom market, March 30, 2005.

Services (MMS) is expected to be launched during the first half of 2005, and 3G services are expected to be launched in mid 2006¹⁰.

The Government is also planning to have a fixed telephone line for each household in the Saudi Arabia by 2005. This project is part of the Telephone Expansion Project 8 (TEP-8), which is also part of an initiative to modernize STC and improve telecommunications services¹¹.

Figure 1. STC's fixed and cellular subscribers (in thousands)



Source: Arab Advisors Group Strategic Research Service, On the threshold of competition: an analytical look at the Saudi Telecom market, March 30, 2005

Internet backbone

Saudi Arabia international communication network relies on a mixture of satellite, submarine cables, and terrestrial microwave. Saudi Arabia is the home of Arabsat and has landing points in Jeddah for FLAG and Sea-Me-WE3. By the end of 2004, Internet bandwidth capacity was around 1,566 Mbps. DSL subscribers stood at 3000 by March 2003. The Government has also a stake in the proposed Sea-Me-WE 4 cable¹².

The Internet service in Saudi Arabia consists of three tiers. The first tier is the ISPs, who provide Internet access to the general public, government and private sectors through dialup, leased lines and ADSL. ISPs are connected to the national backbone and to the international link at the Internet Services Unit (ISU). The second tier is the national backbone, which connects most regions in the kingdom and is operated by STC. STC's existing backbone of cable network consists of 76,700 km of cabling, including 16,700 km of fiber optic cable. The third tier is the international link, which connects the national backbone to the international link. The International link is operated by the ISU and all international traffic to the kingdom passes through this link. The ISU currently operates a six STM-1 link with a total bandwidth of 930 mbps.

ISPs and ASPs

There are 23 licensed ISP providers in Saudi Arabia¹³. They offer a variety of services, including ISDN connections and leased lines. Some of these ISP provide 24-hour technical support and a help desk toll-free number.

¹⁰ Ibid

¹¹ Paul Budde Communications Pty Ltd, 2004 Telecoms in Middle East, Saudi Arabia, page 118

¹² ibid, page 119

¹³ Source: CITC, Saudi Arabia

Access

In 2003, the total number of Internet hosts was about 15,830 and total number of Internet users reached 1.5 million¹⁴. Table 5 presents the prices for Internet usage.

Table 5. Individuals Internet Prices (2002)

	Lowest limit	Highest limit
Monthly subscription fee	SR 00	SR 00
Charge per hour	SR 0.85	SR 1.50
Open plan (unlimited usage)	SR 90	SR 150

Source: http://www.saudia-online.com/ISP/internet_service_prices.htm

Currently there is no fee for a domain name registration under ".sa". In addition, domain name registration has no expiration date and the registration does not need to be renewed¹⁵. In terms of monitoring the Internet, connections are routed through a hub at KACST to control access to offensive Web sites.

PC Dissemination

In 2002, the total number of PC was around 2.25 million in 2004¹⁶. Saudi Arabia launched the household personal computer initiative, represented by a multi-stakeholder cooperation to provide households with computers on an instalment basis, whereby US\$ 10 are paid monthly in addition to the phone bill. This initiative goes hand in hand with a free Internet initiative. In addition, a royal initiative aims at equipping 21,000 schools with PCs and equipments over a period of five years¹⁷.

5. ICT Capacity-building

Computers in schools

A current project, known as the "Use of ICT in teaching science and mathematics at the secondary level of education", for training instructors through organized courses and remote training is being implemented. The Ministry of Education, UNESCO, and a number of national, regional and international organizations jointly sponsor this project, with support from the national private sector. Moreover, teachers are provided with support and incentives to apply for International Computer Driving License (ICDL) and Teacher Computer Driving License (TCDL) with international accredited corporations¹⁸.

Vocational training

The General Organization for Technical Education and Vocational Training (GOTEVOT), which is a government authority responsible for vocational training in the kingdom (refer to table 6), announced a project in February 2004 to revamp the development of occupational skills in support of the Saudization drive. The "National Occupational Skill Standards and Curriculum Development Project," aims to improve training and qualifications of nationals and to bring them in line with the actual needs of the labor market. BAE Systems has been providing administrative assistance to GOTEVOT and access to international resources as well as funding, which constituted \$3 million for the first phase of the project and \$5.4 million for the second phase, which is expected to have been completed by now.

GOTEVOT has been responsible for the vocational training of up to 64,000 students and it will now be able to raise its capacity to 10,400 students per year. The project has targeted the completion of 125

¹⁴ http://www.itu.int/ITU-D/ict/statistics/at_glance/Internet03.pdf

¹⁵ <http://www.saudia-online.com/ISP/sadomain.htm>

¹⁶ According to Madar Research estimates

¹⁷ http://www.recexpo.com/recweb/show_overview.asp?id=9

¹⁸ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 10

national occupational skills standards. It also involved a plan to develop 200 training packages for technology colleges, 400 for secondary technical institutes, and 200 for vocational training centres. GOTEVOT also plans to develop national occupational licensing system.

Table 6. General Organization for Technical Education & Vocational Training

Units	1982	1992	2002	2004
College of Technology	0	6	20	24
Secondary Industrial Institutes	8	10	10	10
Secondary Commercial Institutes	10	11	16	16
Secondary Institutes for Technical Inspectors	2	3	5	5
Secondary Agricultural Institutes	1	1	3	3
Vocational Training Centers	21	30	32	34
Total	42	61	86	92

Source: GOTEVOT website

University education

Over half a million students are enrolled in Saudi Arabia's eleven multi-discipline tertiary institutions, which include eight public universities and three more being established. Table 7 presents the website of some universities along with a listing of their programmes and offered ICT degrees.

Table 7. Saudi Universities Offering ICT Programmes

Universities	Colleges/Centre	Programmes	
		Bachelor	Master/PhD
King Saud University (College of Computer & Information Sciences)	College of Computer & Information Sciences (www.ccis.ksu.edu.sa)	<ul style="list-style-type: none"> ▪ Computer Sciences ▪ Computer Engineering ▪ Information System ▪ Information Technology 	<ul style="list-style-type: none"> ▪ Computer Sciences ▪ Computer Engineering ▪ Information System
King Abdul Aziz University	College of Engineering (www.engg.kaau.edu.sa)	<ul style="list-style-type: none"> ▪ Computer Engineering ▪ Electronics & Communications Engineering 	<ul style="list-style-type: none"> ▪ Computer Engineering ▪ Electronics & Communications Engineering
King Faisal University	www.kfu.edu.sa Arabic		
Umm Al-Qurra University	Information Technology and University Development Center www.uqu.edu.sa		
Imam Mohammad bin Saud University	www.imamu.edu.sa Arabic		
King Khalid University	College of Computer Science www.kku.edu.sa	<ul style="list-style-type: none"> ▪ Computer Science ▪ Information System 	
King Fahd University of Petroleum and Minerals	Information Technology Center www.kfupm.edu.sa/itc		

Source: Universities Websites

Research, Development and Innovation in ICTs

There is little activity taking place in ICT research and development in Saudi Arabia such as that carried out by Saudi ARAMCO (mainly in the area of supercomputers) and some universities.

6. Building the ICT sector

ICT firms

Saudi Arabia is the largest market for ICT in the Middle East. The hardware market has grown consistently by 20% over the last five years. Internet penetration has also undergone similar growth, including incorporation of the latest technology.

Investment in ICTs

Investment Opportunities in Saudi Arabia	
\$140 billion	Physical infrastructure
\$70.7 billion	Telecom and IT
\$10.7 billion	Educational and training

Source: Saudi Committee for Development of International Trade, 2004

Nearly all enterprises use computers, and 82% of these are equipped with dedicated servers¹⁹. Annual sales of computers and related software in the Saudi Kingdom are worth up to one billion dollars a year and sales are growing steadily by 2 to 3% a year²⁰.

Among the significant investments in ICT is the establishment of a PC assembly plant by HP in Saudi Arabia to cater for the kingdom and some regional countries.

Government facilitation

The Saudi government established the Communications and Information Technology Commission (CITC) in 2001 to ensure the provision of high quality universal telecommunications services at affordable prices, as well as regulation of some tasks related to the information technology sector. The commission has been in charge of facilitating the gradual liberalization of the telecommunication sector. The opening of the telecommunications market for competition started with offering a second mobile license in the last quarter of 2004 (Ittihad Etisalat was awarded the license and it is due to launch operations by end 2005). Meanwhile, competition in the fixed telephone market has been advanced to 2006 instead of the initially announced 2008 date.

On public level, the government is facilitating widespread use of ICT products with the “Home PC Initiative”, which seeks to facilitate the sale of one million PCs to home users in the next five years (by 2010) through monthly instalments included in users’ telephone bills.

7. Applications in government establishments

Computerization of public administration

Under a royal directive dated 20 March 2003, and within the framework of the strategic visions for applying e-Government, the Public Investments Fund of the Ministry of Finance developed a programme for establishing e-government, based on a detailed action plan that includes policies for establishing e-government projects²¹.

¹⁹ <http://www.sagia.gov.sa/printpage.asp?ContentID=7&NewsID=493&Lang=en>

²⁰ http://www.recexpo.com/recweb/show_overview.asp?id=9

²¹ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 14

The computerization level at Saudi government departments and organizations can be described as low to moderate, depending on location, with the capital, Riyadh having one of the highest automation levels in the country.

Digitization of information

The Ministry of Interior, along with its major departments such as security forces and immigration, are increasing their automation, as well as leading the digitization of public record. The ministry has implemented the Smart Card Project, which led to replacing the traditional Civil Affairs I.D. with a smart ID. In later stages, the project aims at integrating into one card some of the other government cards such as the driving license and family card. The electronic passport application is also being used and is considered to be a state-of-the-art technology solution worldwide. (Source: Saudi e-Government Website).

The National Information Center (NIC) of the Ministry of Interior is building a portal for services to be offered to individuals. The portal will enable Saudi citizen to obtain information on the government services, i.e., requirements, relevant e-forms, and the possibility of providing twenty services electronically. The project also includes setting up around 100 electronic kiosks. (Source: Saudi e-Government Website).

e-government plans

With an e-government readiness index of 0.386²², Saudi Arabia international e-government readiness rank is 105²³. The e-government programme in Saudi Arabia is referred to as Yesser²⁴. Currently, an e-government portal is being developed²⁵ and most government ministries have a Web site. In addition, steps are being taken by the Ministry of Interior to adopt smart cards and to establish the infrastructure for the public-key-infrastructure (PKI).

The MCIT was directed in 2003 to formulate a plan for providing government services and transactions electronically. Accordingly, the ministry established an e-Government Program in 2004 in conjunction with the Ministry of Finance and the CITC. The three government bodies have joined efforts to develop the Saudi E-Government Services Portal. The portal project, which is divided into several phases, seeks to facilitate innovative and effective use of the ICT in the country to simplify government transactions with the people.

The kingdom has set 2008 as the deadline for making all basic public services available online, effectively establishing e-government (refer to table 8).

e-procurement applications

As part of its ongoing regional expansion efforts in 2004, Tejari, in Gitex, has announced Tejari Saudi Arabia, its latest franchise in the GCC²⁶.

Computerization of customs processing

The Department of Modernization and Administrative Development of the Saudi Customs is responsible for introducing state-of-the-art automation technologies to transform all manual works into automated procedures through a Kingdom-wide computer network linking Saudi Arabian Department of Customs (SADC) headquarters with different customs ports²⁷.

²² According to the UN E-Government Readiness Report 2004

²³ 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 187

²⁴ www.saudi.gov.lb

²⁵ <http://www.saudi.gov.sa/prmierep02.asp?menu=Projects>

²⁶ <http://www.tejari.com>

²⁷ <http://www.saudi-customs.net>

Table 8. Saudi E-Government Program Work Plan

Track	Duration	Programs
First Track (The Fast Track)	2 years	<p>Providing the basic program requirements. Executing a number of pilot e-government projects that are selected according to the following criteria:</p> <ul style="list-style-type: none"> ➤ High revenue; ➤ Quick results; ➤ Relatively low implementation cost.
Second Track	5 years	<p>This track starts with the beginning of program implementation and continues for five years. In this program consultant will be appointed and task to be performed:</p> <ul style="list-style-type: none"> ➤ Formulating the program’s execution plan and identifying the priorities; ➤ Formulating the policies, procedures, specifications and regulations; ➤ Government organizations are to be implemented their e-Government plans.

Source: Saudi e-Government Program (www.egov.gov.sa)

Computerization of taxation and revenue management systems

The Department of Zakat & Income Tax (www.dzit.gov.sa) is apparently considering plans for further automation of its processes, which may include the deployment of computerized management systems.

8. Applications in Education

e-learning

Saudi Arabia has launched a comprehensive plan to integrate ICT in education. The following is an overview of selected projects being deployed²⁸:

- In 2003, the ministry of education started the implementation of an education system with 41,000 PCs and enables 1.5 million students and more than 60,000 teachers to have the chance to learn information technologies²⁹.
- Prince Abdullah Ibn Abdul Aziz computer project for students “Watany” envisages the provision of a computer per ten students, connecting all schools with national network, and providing local area network services in each school.
- Developing school libraries into learning resources centres (LRC).
- Computer-based labs project gives students the opportunity to learn through experimenting, observation and induction, using interactive software applications on computers sensors.
- “Ta’heel” project for training high school students in five areas of informatics, namely desktop techniques, system development, Internet, computer networks, and computer maintenance.

e-school projects

The AGiLiNCE Enterprise Productivity Suite now supports mission-critical information exchanges

²⁸ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 11

²⁹ <http://h20247.www2.hp.com/PublicSector/cache/79779-0-0-197-470.html>

between the ministry staff and the 360,000 teachers employed by the ministry, spread geographically across the country. This ministry is the largest Government organisation in the Middle East³⁰.

Virtual universities

There are currently no known virtual universities in Saudi Arabia.

9. Applications in Commerce and Business

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

Saudi Arabia has a standing committee on e-commerce that holds monthly meetings for undertaking the tasks identified in the plan of action, approved on 7 August 2001³¹. Laws to streamline e-commerce in Saudi Arabia are being drafted³². In late 2002, Business-to-Business (B2B) e-commerce forecasts were estimated at USD 1.5 Billion and are expected to rise to USD 8 billion in 2005. Similarly, B2C revenues were estimated at USD 170 million and are expected to rise to USD 470 million in 2005³³.

The Public Investments Fund of the Ministry of Finance is implementing the Saudi Project for Electronic Data Interchange (SaudiEDI) with the aim of securing speed and transparency in business. This project is concerned with international e-trade in Saudi Arabia³⁴.

Availability and quality of e-banking

The Saudi Arabian Monetary Agency (SAMA), in co-operation with commercial banks, is developing the banking technology in Saudi Arabia with the e-commerce Trust Centre. All Saudi banks were linked to the final operational phase of the e-commerce Trust Centre since September of 2004. Work is underway to link non-Saudi banks operating in the Kingdom³⁵. Table 9 lists Internet banking in Saudi Arabia.

Table 9. Internet Banking Facilities of Saudi Banks (2003)

Bank	Website	HQ	Retail E-Banking	Corporate E-Banking
National Commercial Bank	www.alahli.com	Jeddah	Yes	Yes
Saudi American Bank	www.samba.com.sa	Riyadh	Yes	Yes
Saudi British Bank	www.sabb.com.sa	Riyadh	Yes	Yes
Banque Saudi Fransi	www.alfransi.com.sa	Riyadh	Yes	Yes
Saudi Hollandi Bank	www.shb.com.sa	Riyadh	Yes	Yes
Saudi Investment Bank	www.saib.com.sa	Riyadh	Yes	No
Arab National Bank	www.anb.com.sa	Riyadh	Yes	Yes
Bank Al-Jazira	www.baj.com.sa	Jeddah	Yes	Yes
Riyadh Bank	www.riyadbank.com.sa	Riyadh	Yes	Yes
Al Rajhi Banking & Investment Corporation	www.alrajhibank.com.sa	Riyadh	Yes	Yes
Gulf International Bank	www.gibonline.com	Riyadh*	No	No

Source: Madar Research

* Branch

³⁰ <http://www.pstm.net/article/index.php?articleid=98>, April 2004

³¹ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 12

³² <http://www.arabnews.com/?page=6§ion=0&article=60176&d=9&m=3&y=2005>

³³ Middle East-Broadband and Internet Markets, Saudi Arabia, Paul Budde Communications, 2004

³⁴ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 15

³⁵ <http://www.gtnews.com/article/5906.cfm>

Maturity of regional ATM and banking networks

Moreover, in 2004, SAMA selected CyberGuard's premium firewall/VPN appliances to provide the information security for a new ATM network called the "SADAD Project". SADAD is a nationwide network that will allow citizens throughout Saudi Arabia to pay utility, phone and other bills securely at ATM machines. The project is in collaboration between all the banks in Saudi Arabia under the sponsorship and supervision of the SAMA³⁶.

During the last decade, there has been tremendous growth of e-payment in the banking sector in Saudi Arabia. The popularity of plastic cards and the change in consumer trends in using plastic cards instead of traditional cash payments for daily purchases is evident from the growth in payment card, ATM and merchant location numbers. Currently there are more than six million payment cards compared to a merger figure of 0.55 million in 1991.

Electronic banking facilities in Saudi Arabia have increased considerably over the years. In order to meet changing banking trends among customers, all the kingdom's banks have upgraded and expanded their electronic infrastructure. This has resulted in the increase of ATMs from 1,997 in 1999 to reach at 4,092 in 2004, whereas merchant locations have increased from 16,419 in 1999 to 35,521 in 2004.

Table 10. Electronic Payment Facilities of Saudi Banks 2004

Bank	Branches	ATMs	Points-of-Sale
The National Commercial Bank	246	892	6,005
Samba Financial Group ²	65	316	3,033
Saudi British Bank	68	240	3,551
Banque Saudi Fransi	62	174	2,765
Saudi Hollandi Bank	38	144	3,566
Saudi Investment Bank	15	123	196
The Arab National Bank	117	381	5,174
Bank Al-Jazira	17	27	–
Riyad Bank	193	619	4,437
Al Rajhi Banking & Investment Corporation	393	1,175	6,794
Gulf International Bank ¹	1	–	–
Emirate Bank ³	1	1	-
Total	1,216	4,092	35,521

Source: Saudi Arabian Monetary Agency

Note: 1. The Gulf International Bank established a branch in August 2000;

2. Effective from the beginning of 2004, the name of Saudi American Bank was changed to Samba Financial Group;

3. The Emirate Bank established a branch in August, 2004.

Maturity of Bank to Bank financial transfer system

The Saudi Monetary Authority has also established a system for speedy money transfer known as "SARIE"³⁷.

10. Applications in Healthcare

Databases for national healthcare

Government healthcare providers in Saudi Arabia have been increasing their adoption of advanced ICT systems, but without coordinating efforts to build up to one national network and depository of health

³⁶ http://www.cyberguard.com/news_room/press_releases

³⁷ ICT in Saudi Arabia, reference WSIS/PC-3/CONTR/25-E, 28 May 2003, page 15

records. There are 20 different health information systems (HIS) deployed separately, especially in the large regional hospitals in Saudi Arabia, without being connected with each other. On the other hand, there are some 40 hospitals connected to the Ministry of Health's wide area network (WAN). The ministry has developed a system in-house for primary healthcare centres (PHCCs), which is now used by nine centres, which have connectivity through Internet dial-up. The Ministry of Defence also runs HIS in 10 of its hospitals, but they are not connected via network. Meanwhile, the National Guard Health Affairs provides modern health care to National Guard employees and their dependents. It has recently installed Clinical Informatics System, which will streamline and standardize all its medical records, documentation, and expedite the system to optimise its resources. Most private sector hospitals also have HIS in place.

However, the Ministry of Health has recently launched a project with the aim of building a centralized national Electronic Health Record (EHR) database that connects to all HIS in the kingdom to allow the transfer of data and records electronically and build a national electronic healthcare system. The project is starting with a major hospital in each of five main regions, with a regional server connected to the ministry's server, and a smart ID card used in each hospital for access, which is currently being designed³⁸.

Telemedicine and medical use of teleconferencing

In 1993, the e-Health Centre was established by a royal decree and the project was named "KFSH&RC". The centre utilizes fibre optics and international videoconferencing via STC, with a view to facilitating access to obtaining medical consultations and to disseminating healthcare educational activities. Moreover, the National Telemedicine Network connected sites were increased from 5 to 20 (Refer to Table 11 for a listing of the National Telemedicine Network). Saudi Arabia is also establishing 19 regional clinics, starting with Prince Abdullah Hospital, Bisha³⁹.

One of the most active parties in telemedicine in Saudi Arabia is Sultan Bin Abdulaziz Al-Saud Foundation, which has established the Sultan Bin Abdulaziz Medical & Educational Telecommunications Program and the MeduNet Program to promote and support telemedicine in the kingdom and telemedicine cooperation with top medical centres around the world.

Table 11. National Telemedicine Network

	Site Name	City
1	The Office of his Excellency, the Minister of Health	Riyadh
2	King Faisal Specialist Hospital & Research Centre	Riyadh
3	King Fahad National Centre For Children's Cancer & Research	Riyadh
4	King Faisal Specialist Hospital & Research Centre	Jeddah
5	King Khaled University - College Of Medicine	Abha
6	King Saud University - College Of Medicine	Buraidah
7	King Fahad Hospital	Baha
8	Prince Abdullah Bin Abdulaziz Hospital	Bisha
9	King Khaled Hospital	Njran
10	King Fahad Specialist Hospital	Buraidah
11	Dammam Central Hospital	Dammam
12	King Fahad Hospital	Madina
13	Maternity & Children Hospital	Madina
14	King Fahad Medical City	Riyadh

³⁸ Presentation made by Fahad Al-Otaibi, CIO, Ministry of Health during the Fourth Regional Conference on e-Health, in June 2005

³⁹ <http://www.kfshrc.edu.sa/telemedicine/r1425/>

15	King Khaled Hospital	Hail
16	Maternity & Children Hospital	Skaka
17	King Khaled General Hospital	Qurayyat
18	Aseer Central Hospital	Abha
19	King Khaled Hospital - College of Medicine	Abha
20	Al-Thwra General Hospital	Yemen

Source: <http://www.kfshrc.edu.sa/telemedicine/r1425/>

Healthcare information technology systems are fast maturing to levels comparable with those deployed in developed countries, especially with the current implementation of the Ministry of Health's centralized HER database.

11. Digital Arabic Content

Arabic vs. English content on the Web for national use

Most of Saudi Arabia Web sites are in Arabic. In April 2004, the Ministry of Communication and Information Technology launched a competition for encouraging digital Arabic content⁴⁰. For many years, SaudiNIC (Saudi Network Information Center) has collected valuable experiences and presented many contributions in promoting Arabic domain names.

Local creation of software products in Arabic

Saudi Arabia does not have large-scale development of Arabic software products, nor does it have significant exports of software. Large enterprises in the kingdom are responsible for the only prominent development of any software in Arabic in the kingdom, such as Saudi ARAMCO, SABIC and SAMBA (Saudi American Bank), which they use to serve their internal needs. ARAMCO stands out for having Arabized the well-known German enterprise solution, SAP. ARAMCO, which has the largest installation of SAP in the world, has even developed additional modules for the solution through its SAP Arabization Centre, which are now available commercially in agreement with SAP.

IT solution providers in the kingdom also carry out some Arabic software development as part of their system integration and related services. Otherwise, a small number of IT companies are developing Arabic software in the fields of education, entertainment and religion, but they remain a very small industry. Website development and Arabization services are also available to meet a limited market demand.

Obstacles for its development and ways for removing them

Piracy has been a persistent problem for local software development, in addition to low market demand, mainly due to low PC penetration in Saudi Arabia. The kingdom, however, is believed to have a potential for software development, which can be realized through proper training of local IT skills and talents, especially when considering that Saudi Arabia is home to one of the most active Internet hacker community in the Middle East.

⁴⁰ <http://www.mcit.gov.sa/home.asp?l=AR&p=137>

