

# “Development of electronic contents increasing fast in Cuba”

## factfile

Population of the country: 11,236,790 (2007 Yearbook)  
Total Number of Internet connections: 1,450,000 (2008)  
Total Number of Telephone lines: 1,419 825; 12.5 per 1000 inhabitants (2008)  
Total number of Mobile connections/users: 331 736; 3.4 per 1000 inhabitants (2008)  
Total Number of PC installations: 630,000 (2008)  
Total number of websites: 5,400 (2008)  
Total numbers of universities: 65 Higher Education Institutions and 3,150 University Branches (2008)  
Percentage of literate population: 99.8 (2008)  
Percentage of youth population: 38% under 30 years (2007 Yearbook)

How would you define the meaning of e-Content in your country in terms of its true meaning and practical implication?

The basic concept is mass societal involvement in producing e-contents on the most varied subjects, which may work as an information service or product on any digital platform. There are a number of state-fostered projects and initiatives in Cuba that are the pillars of this conception.

## 5 pillars

### *of e-Content development in Cuba*

- ↳ Schooling level of the population
- ↳ Governmental Policy and Strategic Plan on ICTs
- ↳ Infrastructure, technology and tools
- ↳ Training in digital technologies
- ↳ Stability, safety and quality of services and infrastructure

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**Q** What area of e-Content is best developed in your country? For example, e-health, e-biz, e-culture, e-gov, e-entertainment, e-learning, e-science, or e-inclusion.

I would have to say that the e-entertainment and e-culture categories are the best developed e in Colombia at the current time. This is led again by the leading publishers, which are newspapers and magazine groups. Bogota (our capital) is very diverse in terms of culture and entertainment, and several info-sites have been launched recently, in order to guarantee full information about cultural and entertainment activities for citizens. I would also mention the fact that Colombia is a big contributor to user generated content (ugc) sites such as hi5, MySpace, and Facebook.com - according to some published statistics, we are among the top 3 or 4 contributors to these sites in the Latin American region as a whole. The insight here is that - given the right tools - Colombians are prone to publishing contents generated by themselves, online.

**Q** Which sector in your country is more aggressive in developing e-Content - business or private sector; government or civil society?

Definitely the private sector, especially the leading media groups (TV, newspapers, magazines). With DFI (direct foreign investment) from countries such as Spain, Chile, and the USA, these media conglomerates understand where the future of communications lie, and invest accordingly.

**Q** Can you list the major initiatives, which influenced and aggravated the development of e-Content in your country?

One major event took place in 2006. Two large media groups, *Semana* (magazine publishers) and *el tiempo* (newspapers + private TV), had outsourced their commercial efforts for their Internet portals to terra networks for the last 5 years. On August 2006, they decided to split from terra, and begin commercial efforts on their

own. As a result, a strong race started between both groups to both generate and sell the best e-content sites on a wide variety of topics, mainly on information, culture, and entertainment. As a result of that, many medium-sized and small publishers had to "sharpen up" to be able to survive as e-content sites, selling advertising as their revenue model. This was a very healthy move for e-contents in general, and for online advertising as well.

**Q** How would you describe the major bottlenecks on the path of e-Content development in your country?

The major bottleneck is a paradigm that e-contents, digital media, and technology in general are for the upper class. Hence, the over-development of categories like entertainment and culture, and the under-development of categories like health, science, e-inclusion, e-business, e-government and e-learning.

**Q** In majority of the countries, e-Content development is significantly dependent on ICT infrastructure and ICT facilities. But, in some countries that are quite developed, ICT has become part of daily life and e-content development is primarily subjected to the initiatives of an individual/organization/government, etc. Whereas, in some countries, especially those, which are developing and under developed, e-content development is largely dependent on ICT infrastructure. What is the situation in your country? Please explain in detail.

E-content development is dependent on a few economic groups in our country. I do not believe that e-content development is largely dependent on ICT infrastructure. It is largely dependent on education and paradigm shifts regarding the interaction of the masses with technology.

**Q** How would you describe the ICT scenario in your country? Please describe in terms of infrastructure, penetration, acceptance and policies.

Two presidencies ago, there was a strong initiative from the government called "agenda de conectividad," or "connectivity agenda." The major aim of this initiative was to guarantee that people of all income-levels, especially children, would have access to computers and to the Internet. This gave the whole country a consciousness of the importance of technology and the Internet in the daily lives of ordinary citizens. With the entry of large multinational companies like telefonica (from Spain), infrastructure for connectivity has increased, and broadband penetration is increasing as prices to access the service decrease as well.

**Q** How do you see the future of e-Content development in your country?

The first step will be to sell the idea that developing e-content is important. The digital divide and content gap concepts will be useful in order to illustrate the importance. As in most underdeveloped nations, education comes next. We need to make sure that all children have access to education, and hence, to technology.

Once these elements are in place, we will start to see the rise of an e-content society, led by a generation that has been touched by the information society.

**Q** Please explain which medium is the most preferred medium for e-content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

I believe that the web is the preferred medium for e-content development because it is the natural space for it. As mobile devices evolve, these will naturally become the natural medium for e-content. Other household items, the refrigerator screen, will become excellent media for e-content deployment.

## “e-Content is mainly news driven in Colombia”

How would you define the meaning of e-Content in your country in terms of its true meaning and practical implication?

E-Content is mainly news driven in Colombia. Our largest online publisher - eltiempo.com - is the online version of the leading (if not monopolistic) daily newspaper.

### factfile

Population of the country?  
45,013,672 (2008)  
Total no of Universities: 7 (National); 24 (Departmental); 38 (Private)  
Total Number of Internet connections: 17,478,505 (2008)  
Number of broadband users : 1,485,715 (2008)  
Internet hosts in Colombia: 581,877 (2006)  
No. of individuals with computers: 1,500,000  
Total number of household having TV/cable TV: 4,590,000 (TV) / 575,280 (Cable Subscribers)  
Literacy Rate: 91.3%  
Number of telephone connections: 7,851,649 (2005)  
Total number of mobile connections: 31 million (2007)  
Percentage of literacy : 92.6% (2003)  
Percentage of educated population: 92.6%

Sources:  
[http://en.wikipedia.org/wiki/Demographics\\_of\\_Colombia](http://en.wikipedia.org/wiki/Demographics_of_Colombia)  
[http://en.wikipedia.org/wiki/List\\_of\\_universities\\_in\\_Colombia](http://en.wikipedia.org/wiki/List_of_universities_in_Colombia)  
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[http://en.wikipedia.org/wiki/Demographics\\_of\\_Colombia](http://en.wikipedia.org/wiki/Demographics_of_Colombia)

## 5 pillars

### of e-Content development in Colombia

- ↳ Education
- ↳ Creativity
- ↳ Culture
- ↳ Exposure
- ↳ Infrastructure

**Q** What is the current status of e-Content in your country - across all industry and aspects.

As mentioned in the previous answer, e-Content is mainly news driven in our country. This means that there is not enough awareness of the importance, or the potential implications and benefits, of developing e-Content as a purpose. They are currently a consequence of the existing media outlets, not a goal or an end by itself.

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tial concepts in Science and Technology. It also devotes specific sections to children and teenagers to arouse their interests in science and technologies through interactive games and learning experiences.

## E-HEALTH

### Continuing Medical

### Education for Medical Practitioners (<http://cme.hkdu.org/>)

The objective of the site is to offer a one stop solution to satisfy the continuing medical education (CME) needs of doctors in Hong Kong and overseas. Doctors all over the world have the same need to upkeep themselves with the rapid medical

advances through continuing education for delivery of patient care.

## E-INCLUSION

### China Mobile Information Networks for the Rural Areas

(<http://www.12582.com>)  
“China Mobile information network for Chinese rural

area” promotes the construction of new rural area which benefits 800,000,000 farmers nationwide. Farmer can get abundant information of agriculture by such various modes as sending messages to 12582, direct dialing 12582 and logging on [www.12582.com](http://www.12582.com).

Content quality and influences in China is expected to become an important player in the world market. The use of eContent in various business sectors is expected to become a major management trend and will create significant positive impact to the modernizations of the businesses of China.

Digital divide between urban and rural area will be narrowed, with the government's strong initiatives to improve the countryside's internet capability and promote the use of ICT technologies to tackle the social issues experienced in the rural and agricultural development.

The society in China is expected to evolve into a digital society, like most of the countries in the West.

**Q** Please explain which medium is the most preferred medium for e-content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

Internet and Wireless e-Content are the most preferred medium

## Best Practices

### E-LEARNING

#### **e-School Teaching and Learning Courseware** (<http://www.bwcss.edu.hk/~e-schoolbag/>)

This is a learning website which is designed and produced by our teachers. Unlike those websites produced by commercial sectors, our purpose of making this website is mainly focused on providing better education. Without being influenced by any commercial consideration, teachers can concentrate on designing a more suitable learning environment / platform for children.

### E-GOVERNANCE

#### **Smart Channel (also known as e-Channel) - Self-service Clearance System for Drivers and Passengers at Immigration Check Points**

With a view to fostering quality and efficient immigration clearance services to exceeding 200 million travelers plus 7.5 million drivers of goods vehicle and private car crossing the border annually, the Hong Kong Immigration Department (ImmD) has developed and introduced Smart Channel since December 2004. It integrates state-of-the-art technology to substitute human effort in performing labor-intensive tasks and causes behavioral change of vehicle

drivers and travelers who are enabled to conduct self-service clearance.

Smart Channel which is equipped with visual and audio guidance is characterized by easy and simple usage as only two simple steps are all required for users. With the implementation of Smart Channel, average clearance time is trimmed down and privacy of users is well protected.

### E-BUSINESS

#### **DigitalCopyright.hk, One-Stop Digital Content Marketplace** (<http://www.digitalcopyright.hk>)

This project aims at preserving creativity and realizing the profitability of creativity in the digital economy. Digitalcopyright.hk is not only a one-stop trusted e-business marketplace, but also a centralized clearance solution to bridge both digital content owners and consumers who treasure creativity.

### E-CULTURE

#### **The Palace Museum - Treasures of the Chinese Finest Culture** (<http://www.dpm.org.cn>)

The website demonstrates remarkable efforts of cultural preservation. The website of the Palace

Museum utilizes multi-media technologies to showcase every aspects of the Palace Museum, including its history, architecture, artifacts, publications, and conservation programs.

### E-ENTERTAINMENT

#### **Xplus Personalized Digital Media Distribution Platform** (<http://www.xplus.com>)

The Xplus platform provides user-friendly tools for individuals and SMEs to create their own original on-line magazines and newspapers, distributed through its network of 11 million subscribers. The platform has built on a technology to record and predict preferences of each of the subscribers and feed the personalized contents to the subscribers.

### E-SCIENCE

#### **China Digital Science and Technology Museum** (<http://www.cdstm.cn>)

The website serves as a well display of scientific concepts and knowledge for the general public. Through its well utilization of information technologies, multi-media graphics and virtual reality technologies, the website presents a thorough and easy-to-understand knowledge base for essen-

**Q** What is the current status of e-Content in your country - across all industry and aspects.

The e-Content development in China has seen tremendous growth, with more and more information are digitalized and delivered electronically. The value and significance of e-Content is widely recognized and initiatives of creating better and more e-Content have been witnessed across the county. Nevertheless, improvements and efforts need to be devoted to the effective use and applications of e-Content.

**Q** What area of e-Content is best developed in your country? For example, e-health, e-biz, e-culture, e-gov, e-entertainment, e-learning, e-science, or e-inclusion.

China has been developed rapidly in all aspects of e-Content and all-round growth is witnessed. The areas in e-Science, e-Entertainment and e-Business have been particularly outstanding in terms of the applications and quality.

**Q** Which sector in your country is more aggressive in developing e-Content - business or private sector; government or civil society?

Both public and private sectors have been developing very aggressively in e-Content. With the effective practice of market economy and policies to encourage the e-Content development, the private sector's growth and achievements, especially in the business sector, are particularly remarkable.

**Q** How would you describe the gradual progress of development of e-Content in your country in terms of its rise? Any timelines?

Ever since the internet is adopted in China, the e-Content development has undergone exponential growth. With the major commercial portals as the driving force, the e-Content development has experienced its first dramatic boom at the turn of millennium.

The policies of promoting e-Government and public services have continued the wave of development in early few years of 21st century. The recent widely adopted web 2.0 technologies, e-Content development has seen another dramatic boom in these 2-3 years.

**Q** Can you list the major initiatives, which influenced and aggravated the development of e-Content in your country?

1. Local portals launched.
2. Development of mobile value-added services.
3. Web 2.0 technologies & applications

**Q** How would you describe the major bottlenecks on the path of e-Content development in your country?

The penetration of broadband services in remote areas is one of the major limiting factor for the e-Content development. Another major bottleneck is the delay of launching 3G services in mobile.

**Q** In majority of the countries, e-Content development is significantly dependent on ICT infrastructure and ICT facilities. But, in some countries that are quite developed, ICT has become part of daily life and e-content development is primarily subjected to the initiatives of an individual/organization/government, etc. Whereas, in some countries, especially those, which are developing and under developed, e-content development is largely dependent on ICT infrastructure. What is the situation in your country? Please explain in detail.

ICT Infrastructure development has continued to be one of the most important agenda of China, despite its remarkable growth and achievements in the past few years. In 2006, the country has 900 million households connected with telephone lines and internet users amounted to 160 million. 96% of the rural counties are

equipped with the necessary infrastructure to internet connection. ICT has become an important industry in China, which contributed 7.5% of China's GDP in 2006. Versatile e-Contents and applications are available to most of the consumers and become an integral part of business operation. Some of which has achieved world-class quality and competitiveness.

**Q** How would you describe the ICT scenario in your country? Please describe in terms of infrastructure, penetration, acceptance and policies.

Telephone penetration is very high among the developing countries but still short of the average penetration rate in developed countries. Internet penetration, especially broadband penetration, still needs many improvements to reach the standard of a developed country. ICT is well adopted in business environment but a significant number of rural households have not enjoyed life of digital era and the use of ICT is simply not in their daily life. Policies and business development have created a favorable environment to push for further development of ICT in the country and it is expected that ICT adoption will continue to grow in the future.

**Q** How do you see the future of e-Content development in your country?

ICT infrastructure will continue to improve and penetration rate can be expected to experience increased growth in the coming years. It is forecasted that by 2010, the country will have a total number of 600 million mobile users, 400 million of fixed line users and 200 million of internet users.

ICT and information industry will continue to evolve as a major business sector in China and e-Content is expected to experience continual growth. With the introduction of digital TV and strong development trends in games and animation, the e-

# *“e-Content development in China has seen tremendous growth”*

## factfile

Population of the country: **1.3 billion** people (1,321,851,888 as of mid-2007)

Total Number of Internet connections: **162,000,000**

Total Number of Telephone lines:

Main lines in use: **372 million** (August 2007)

Total number of Mobile connections/users:

Mobile cellular: **515 million** (August 2007)

Total Number of PC installations?

Internet users: **162 million** (June 2007)

Total number of websites

Domestic webpages: **4.47 billion** (2007)

Local Webpage Contents: **22,306 GB** (2007)

Total numbers of universities?

**605** universities with undergraduate programs (2006)

Percentage of literate population?

**90.9%** of the population is literate (2006)

Percentage of educated population?

**141.09 million** (2001)

Percentage of youth population?

Youth Ages 10-24, **319,900,000** (2006)

Sources:

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[http://www.chinadaily.com.cn/bizchina/2007-10/04/content\\_6152666.htm](http://www.chinadaily.com.cn/bizchina/2007-10/04/content_6152666.htm)

<http://www.internetworldstats.com/asia/cn.htm>

<http://www.internetworldstats.com/asia/cn.htm>

[http://www.stats.gov.cn/was40/gjtj\\_detail.jsp?searchword=%D6%D0%B9%FA%B4%F3%D1%A7&channelid=6697&record=2](http://www.stats.gov.cn/was40/gjtj_detail.jsp?searchword=%D6%D0%B9%FA%B4%F3%D1%A7&channelid=6697&record=2)

[http://en.wikipedia.org/wiki/People's\\_Republic\\_of\\_China](http://en.wikipedia.org/wiki/People's_Republic_of_China)

<http://www.cpirc.org.cn/en/e5cendata1.htm>

<http://www.prb.org/Countries/China.aspx>

How would you define the meaning of e-Content in your country, in terms of its true meaning and practical implication?

e-Content is any information, tools and applications in digital format, which can be transmitted efficiently over network

## 5 pillars

### *of e-Content development in China*

- ↳ Infrastructure
- ↳ Applications
- ↳ Business Drives
- ↳ Culture
- ↳ Languages



materials and gives information about the activities and events on campus.

Importantly, it provides a platform for interaction to both students and instructors, illustrating the concept of e-Learning.

#### **Multimedia Enrichment (offline/DVD, CD-ROM or video materials)**

A governmental project adopted by the Ministry of Education, it is targeted to be a turning point in the history of education in the country that would move Bahrain towards the e-Learning era from its wide angle.

#### **Teacher Anwar (http://www.al-ostath.com)**

A personal website created and managed by a Bahraini teacher, Anwar Hassan Ali, which goes beyond providing direct educational information and offers consultation in sensitive and most debating issues.

#### **Science for 6th Grade (offline/DVD, CD-ROM or video materials)**

CD content to aid the hearing-impaired group in their study requirements. It has a combination of visual aids as well as side

video with sign language. The idea is innovative and has a bright future.

#### **Wasmia Legal (http://www.wasmia.com)**

A website dedicated to provide its audience - especially law students with a comprehensive wealth of references such as state laws, scientific research and many other services, including advisory services to researchers and students.

### **E-SCIENCE**

#### **BCSR website (www.bcsr.gov.bh)**

The website for The Bahrain Centre for Studies & Research (BCSR), an independent scientific body, introduces the user to the center and its activities along with providing other valuable information. The website is rich in content that is relevant to the purpose of the center. A great amount of information is presented in the e-Library section of the website. It contains BCSR publications, audio seminars, academic PhD and Master degree thesis, periodicals and various links to reliable sources of data-

bases and research centers around the world.

### **E-MEDIA**

#### **Akhbar Al khaleej (http://www.araboo.com/site/bahrain-akhbar-alkhaleej-11388)**

One of the leading Bahraini newspapers, Akbar Al Khaleej, has a very well constructed new revamped website that provides the reader / user with easy navigation and access tools. The website provides full fledged daily local and international news. On opening the site, the layout neatly shows the headlines section and further goes on to explain each segment separately along with the visuals related to the news. All pages of the newspaper can be downloaded on PDF including any advertisements published.

#### **Trade Arabia (www.tradearabia.com/)**

Portal for business news and information, covering various industry sectors. It is considered a reference for many organizations as well as businessmen in the region. This is due to its richness in content as its

database includes innumerable companies, classifieds and tools.

#### **Manama Gate (http://www.manamagate.net)**

A website providing its visitors detailed information about the capital of the Kingdom of Bahrain, Manama. The website has many categories such as articles, heritage, characters, organizations, activities, sports, and the city's problems. The easiness and simplicity of the design makes it very easy for the visitors to navigate the website.

#### **Al Waqt (http://www.alwaqt.com)**

The Bahraini newspaper website provides the daily local and international news with easy navigation. It has a dedicated section to Al Waqt writers / authors, where all their columns can be viewed and old journals can be archived. The previous editions are archived and can be accessed easily. Al Waqt has the provision of e-Service, by which the readers can receive the paper electronically.

The authors aim to make folklore parallel to modern life for the purpose of preserving the local identity and uniqueness of the communities that practice it.

#### **Arabic Culture Café** (<http://www.khayyat.net>)

The website houses a wealth of artistic cultural content, ranging from poetry to short stories, music and much more. It offers news and critique of many authors and their artistic work.

### **E-BUSINESS**

#### **BBK Website** ([www.bbkonline.com](http://www.bbkonline.com))

A BBK Bank website that has earned appreciation at many consecutive Bahrain e-Content Award events for providing innovative e-banking services and offering comprehensive up-to-date content, allowing customers to carry out their important transactions online. The content is fully comprehensive and bilingual. The ease of navigation and quality of functionality make BBK online one of the best in the e-business category. News and latest stock quotes add a great value to the website.

#### **BMI** (<http://www.bmi.com.bh>)

The Bank Muscat International (BMI) website that provides comprehensive content and e-banking services. A new SMS service channel has also been

added.

#### **Asry** ([www.asry.net/](http://www.asry.net/))

This company owned by the seven OPEC countries has launched a website that gives a variety of information regarding ship building and repairing yards owned by Asry. All this information is supported with site plans and images. In addition, the website is updated with latest news, a list of all the services types that it provides, as well as a historic background about the group.

#### **Riffa Views** ([www.riffaviews.com](http://www.riffaviews.com))

A website developed to serve a commercial real estate project with detailed information about its facilities, such as the location of this project, the different types of constructed villas and their shapes, and their plan. The 3D models and animation of the real estate project provide clarity about the villas' designs and location. There are few short videos about some of the events organized there.

#### **Global Tourism Club** (GTC) (<http://www.araboo.com/site/bahrain-gtc-travel-106678>)

A website that provides its customer with information about its complete tours packages, online booking for airlines, checking trips, hotel bookings, cars rentals, and all other services that tourists require. It also provides brief infor-

mation about most of the destinations, travel insurance and other useful details.

#### **Moda Mall** ([www.ameinfo.com](http://www.ameinfo.com))

A website for the new international shopping complex located in Bahrain World Trade Centre. The eye catching website emphasizes the various luxurious international brands of fashion. It is dynamic and very rich in animation. The navigation of the site is also simple.

### **E-GOVERNMENT**

#### **Bahrain e-Government Portal** ([www.bahrain.bh](http://www.bahrain.bh))

The e-Government portal is focused on ensuring effective delivery of government services to citizens, residents, businesses and visitors (customers). Currently the portal is providing more than 100 e-services to the citizens.

#### **Bahrain EDB** ([www.bahrainedb.com](http://www.bahrainedb.com))

Website providing all information about doing business in Bahrain and thus helping new business entries in the country. This Economic Development Board (EDB) initiative is full of informative content and quite explanatory in terms of navigation. It explains minute details related to the economy, logistics, ICT, manufacturing and information on many more business establishments within Bahrain.

#### **LMRA** ([www.lmra.bh/](http://www.lmra.bh/))

The Labour Market Regulatory Authority (LMRA) website providing information and e-Services for all stakeholders. The layout and organization make it easy to navigate and find information. The extensive range of e-Services provide required information in a timely manner with sense of protection. The website is true model for how government can leverage technology to provide information and services to citizens.

#### **MOIC** ([www.moic.gov.bh](http://www.moic.gov.bh))

The ministry of Industry and Commerce portal provides facility of e-services to Bahrain citizens and business sectors. It allows them to check their application status on the net. The portal is bilingual with user-friendly navigation to make the content more accessible. In addition, it provides information about all the commerce regulation and laws.

### **E-LEARNING**

#### **Arab Open University website** ([www.aou.org.bh](http://www.aou.org.bh))

A well constructed e-learning model website designed especially for the students affiliated with the university to enable them to communicate directly or indirectly with the educational, administrative and organizational structure of the university. The site helps students to view, download and access the course

country?

Bahrain will have more e-Commerce websites and its economy will further develop with government services becoming online. e-Learning will continue to be implemented in schools and universities and the influence of e-Content will reflect on our daily lives.

**Q** Please explain which medium is the most preferred medium for e-content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

The Internet is the most preferred medium for e-Content, then comes print, mobile, TV and finally radio, considering that most of the e-Content awards in Bahrain went to web products.

## Best Practices

### E-HEALTH

#### Ministry of Health Website

([www.health.gov.bh](http://www.health.gov.bh))

A detailed website by the Bahrain Ministry of Health providing all information and data about the ministry.

#### International Hospital of Bahrain ([www.ihb.net/](http://www.ihb.net/))

IHB is one of the private hospitals in Bahrain. It has an informative website with a simple and friendly interface. It offers online none urgent appointments for most of their doctors along with visiting professors mostly in the same day appointment. In addition, their website is updated on a daily basis and visitors can apply for a job and browse the health library.

### E-ENTERTAINMENT

#### O on your mobile ([www.o.com.bh](http://www.o.com.bh))

It's a new generation of mobile services by Batelco. The areas covered are religion, fun, news and sport. Services such as mobile broadband, video calls and multimedia downloads are also available.

#### Adhari Park ([www.adhari-park.com.bh/](http://www.adhari-park.com.bh/))

An informatics site which aims at marketing Adhari Park by introducing the park to the tourists and Gulf Cooperation Council (GCC) families in particu-

lar that are looking for entertainment during their visit to Bahrain.

### E-INCLUSION

#### Women Gateway ([www.womengateway.com](http://www.womengateway.com))

A trilingual website by Women Gateway which primarily serves women in Bahrain. The site offers news related to women living in Bahrain and also outside the country.

There are various sections such as women portraits, where you are shown examples of successful women in the region and in the world, a Business Directory and an e-library that offers reviews for various books and links to the best online books websites. This site also contains various articles regarding topics that concern women in general such as politics, economy, education and health.

#### Tarbiya Net ([www.tarbia.net/](http://www.tarbia.net/))

One of the pioneer sites in Bahrain that touch upon matters concerning social and educational issues.

Visitors can give their opinions through answering different kinds of beneficial questions. The site contains an e-Library that includes reviews for different kinds of books for local and international users.

#### Traffic Kids

(<http://www.traffickids.gov.bh>)

A unique programme established by the Bahrain Government (Traffic Department) in terms of educating the young generation about traffic rules in Bahrain. Navigation and animation helps the children to go through the complete site easily.

### E-CULTURE

#### Jehat ALShear ([www.jehat.com](http://www.jehat.com))

Jehat offers biographies, online texts, criticism, audio clips, history, and news about famous poets of the Arabic and remaining world, besides translated and non-translated compositions of literature. A very interesting feature of this initiative is mobile Jehat, which offer its visitors the facility of downloading poems on their PDAs. It is a cooperative project led by al-Nadeem Foundation of Bahrain and the poet Qassim Haddad. The simplicity and ease of design make it easy to navigate through the site.

#### Folkcultuer Bahrain (<http://www.folkculturebh.org>)

Folk Culture is a companion website to a physical publication by the same name. It aims to shed light on folklore and traditional games, dishes and habits, be it from Bahrain or the rest of the Arabic world.

**Q** What is the current status of e-Content in your country - across all industry and aspects?

In the last two years, Internet penetration in Bahrain has increased drastically, as there are many Internet service providers in the country providing different types of services such as mobile Internet, ADSL, WiMax etc. As a result, almost every house in Bahrain has an Internet connection. In addition, many initiatives by various sectors in country - such as the Bahrain eContent Award by Bahrain Internet Society which is inspired by the WSA, the formation of Bahrain e-Government Authority and King's Hamad Schools of the future - have contributed to increasing public awareness about e-Content .

**Q** What area of e-Content is best developed in your country? For example, e-health, e-biz, e-culture, e-gov, e-entertainment, e-learning, e-science, or e-inclusion.

e-Government, as the kingdom of Bahrain intends to encourage e-Content in public service applications. The success achieved by Bahrain in this category at the WSA for two successive years would be a good indicator of this. Besides, if we look at the nominations and winners of the national contest - Bahrain e-Content Award - it is pretty clear that government nominations are close to highest and they have delivered good results, which has won them awards as well. I must say that the government in Bahrain is proactive in bringing forth the country on the digital map of the world.

On the other hand, e-Business is also well developed in our country, as the private sector is aware of the importance of e-Content. Once again, going by the national contests, it can be seen that this category is one of the toughest competitors.

**Q** Which sector in your country is more aggressive in developing e-content - business or private sector; government or civil society?

The government, public and private sectors are aggressively competing for e-Content development and the availability of services like online banking, flight reservation; trading and IT services prove that it is a growing trend. However, the establishment of e-Government authority has shown public sector to be more aggressive.

**Q** How would you describe the gradual progress of development of e-content in your country in terms of its rise? Any timelines?

The interest of the citizens in e-Content has grown since the introduction of Internet in the mid nineties. Also, the institution of the Bahrain e-Content Award in 2004 has encouraged web developers to further improve and develop their e-product with a view to meeting international standards and customer satisfaction. In addition, the establishment of Bahrain e-Government Authority, which is focused towards ensuring the effective delivery of government services to citizens, residents, businesses and visitors, has improved the lives of the citizens. Currently, all the government organizations are competing to provide more e-services to the society.

**Q** Can you list the major initiatives, which influenced and aggravated the development of e-Content in your country?

As mentioned earlier, we become active in the last half a decade, but we are pacing very aggressively. Some of the activities of significance are:

1. Establishment of e-Government Authority.
2. Forming a national advisory committee for e-initiative.
3. Launching Bahrain e-Content Award.
4. Future IT conference and exhibition and Global ICT Summit 2004 and 2005.
5. World Summit Award Grand Jury.
6. Arab e-Content Award.
7. Launching B-Online project with Microsoft.

**Q** How would you describe the major bottlenecks on the path of e-Content development in your country?

Currently there are no real or major bottlenecks on the path of e-Content development in my country. However, more awareness is required.

**Q** In majority of the countries, e-Content development is significantly dependent on ICT infrastructure and ICT facilities. But, in some countries that are quite developed, ICT has become part of daily life and e-content development is primarily subjected to the initiatives of an individual/organization/government, etc. Whereas, in some countries, especially those, which are developing and under developed, e-content development is largely dependent on ICT infrastructure. What is the situation in your country? Please explain in detail.

Bahrain has an advanced ICT infrastructure and is well connected through telecommunications. The island is also connected and covered by 3.5G technology and WiMax. Internet services with varying speed and services have achieved very high penetration. Within the framework of the King Hamad Initiative of Future Schools, many public schools have started connecting to the Internet. In addition, the Telecommunications Regularity Authority (TRA) has developed a framework of rules and procedures for new ISPs in the country, which resulted in having multiple ISPs providing different types of services.

**Q** How would you describe the ICT scenario in your country? Please describe in terms of infrastructure, penetration, acceptance and policies.

Our infrastructure is among the best in the region and the penetration rate is the third highest among Arab countries. Also, there are clear policies.

**Q** How do you see the future of e-Content development in your

## *“Bahrain’s infrastructure is among the best in region”*

How would you define the meaning of e-Content in your country, in terms of its true meaning and practical implication?

e-Content means any content transmitted electronically. As there has been an increase in Internet penetration, e-Content is becoming a preferred form of information to be transmitted, especially among the new generation. As a result, many sectors have responded by starting e-projects led by the government.

### factfile

Population of the country: 1,039,297  
Total Number of Internet connections: 80000  
Total Number of Telephone lines: 202000  
Total number of Mobile connections/users: 1116000  
Total numbers of universities: 19 (2 Public, 6 Regional, 11 Private)  
Percentage of literate population: 97.0%  
Percentage of educated population: 95%  
Percentage of youth population: 37.15% (under 25)

## 5 pillars of e-Content development in Bahrain

- ↳ Awareness among individuals, businesses and governments.
- ↳ Creativity in developing new products and services that can compete both locally and internationally.
- ↳ Lowering of the prices of equipments and applications will narrow the digital gap between technology empowered and technology excluded communities and groups.
- ↳ Training web developers and personnel in creating and presenting good content.
- ↳ Legislation and security, so that people handle the new medium with confidence.

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and implementation of the RedDot content management system. A particular challenge was the effective takeover of the entire contents of the multi lingual website. Both the font size as well as the contrast can be varied. Blind users were target on certain key combinations to the desired content and also

get information out there. The site is using the mouse and keyboard equivalent to operate for disabled people with special hardware.

**www.seniorkom.at - EU e-Inclusion Award Nominee 2008**

The Austrian portal for the 50+ generation.

**HELP - Your aid for official channels in Austria - www.help.gv.at - WSA Nominee 2007**

This Web portal is completely web barrier free (Rated by the Web Accessibility Initiative of the EU with triple AAA) and was the winning website 2006 "The Best e-Inclusion Website in a German Language

("Goldene Biene") and 2003 with the e-Europe Award of the European Commission for the best E-Government Website in Europe. Access to the HELP is also possible via multimedia telephone stations, mobile phones, digital TV or classic Internet.

The famous Chess Computer from Baron Kempelen was rebuilt in a 3D animation as well as a virtual reality theatre with 3D cinema.

## E-ENTERTAINMENT

### Microsoft's Incredible Machine

The multi-user game was developed for a big event at a fair. Using smart phones visitors can collect building blocks, which are hidden somewhere at the venue, and assemble them to create a virtual "incredible machine". Visitors have to find specific markers (2D-barcodes) and point their phone's camera at them until the corresponding building-block appears on the display. Back at the booth, these blocks can be arranged to create a virtual machine. Aim of the game is to create a chain-reaction which is as complex as possible. Each building block shows a 2D-animation which can be triggered from one of the block's sides. After the animation has finished the impulse is passed on the other direction. To create a chain-reaction the blocks have to be placed accordingly. Again, the visitor's smart phone is used for interaction. The game links reality with the "digital world" and demonstrates manifold possibilities of emerging technologies.

Wap.win2day.at - WSA

### Nominee 2007

The multi-channel portal win2day.at makes it possible to have access with different media and terminals (e.g. mobile phones) to all games.

### Yetisports Online (www.yetisports.org)

One of the most successful online games - nearly 1 million people in 137 countries play this game every day.

### Hangar-7-Towers in Salzburg (www.hangar-7.com)

The Mayday Bar in the first floor is not only a cocktail bar, it also offers an interactive multimedia fantasy island.

## E-SCIENCE

### Water World

In the historic old water station in Linz offers a multimedia water world. The theme of the presentation is the drinking water in terms of origin, production, components, but also environmental aspects. The choice of presentation elements was exactly on the protected atmosphere of the building and the wider target group. The process is divided into info points, which are characterized by a mixture of experience, factual information, graphic and audio-visual installations, and the staging of an old fountain reward. The visitors will receive detailed informa-

tion about the water clean process, dangers of drinking water, on water protection, on average consumption levels, and water usage and disposal of wastewater. The intended audience ranges from students on different school levels interested adults to trade visitors.

### Frequentis-virtual control center - WSA Nominee 2007.

The Control Room of the Future is located in the new headquarter of Frequentis.

### Encyclopedia of sociology (agso.uni-graz.at/lexikon)

Brings together the life and works of the 50 greatest classical authors of sociology

### Swarovskibirding.com -

An important online meeting point for bird and nature lovers from Swarovski

## E-HEALTH

### Elektra+, a mobile rescue management system for ambulances

"Elektra+" is a highly innovative mobile rescue management system for Red Cross Salzburg ambulances. The solution assures perfect navigation, extremely high usability and thus the fastest possible arrival of the ambulance at the scene of the emergency. Since October 2007 Elektra+ has been successfully operating with

160 vehicles. The system, which has not had a single breakdown since the beginning, is one of the most modern in Europe. Elektra+ can save lives and is an excellent example of how modern technology solutions can provide benefits in many situations as well as fixed to mobile convergence with clear benefits for the general population, which goes hand in hand with a significant increase in efficiency. The Red Cross Salzburg has approximately 200,000 rescue operations per year. For each rescue operation minutes or even seconds can mean life or death.

### Kilo-Coach - Interactive nourishing minute (www.kilocoach.at) - WSA Award Winner 2007

Based on medical and scientific nourishment insight the KiloCoach enables you to lead a healthy lifestyle.

### Eye Exam (www.meduni-wien.ac.at/eyeexam)

Visualise and explain interactive the diagnostic techniques of modern ophthalmology.

## E-INCLUSION

### City of Linz

The information and official public Internet site of the city of Linz (www.linz.at) was restructured to timely converted technologies and barrier-free. Cyber house was responsible for the design

sent since even today some recipients still cannot be reached electronically. The Dual Delivery service automatically determines whether a letter can be sent fully electronically or as a regular mail letter when no electronic delivery is possible. All documents such as official papers, invoices, pay checks etc. can be dispatched in technically and legally secure form within just a few seconds whereby it is ensured that only the intended addressee receives the respective document. The collection time of the serviced document is additionally time-stamped. Electronic dispatching thus opens enormous saving potentials to senders, saving postage costs. When electronic transmission is not possible, the Raiffeisen Informatik Print Output Centre handles processing, printing, enveloping and sending of the letters. Raiffeisen Informatik as the very first European IT service provider received the decision of the Austrian Federal Chancellery to provide the capabilities for electronic delivery of official registered mail letters. With consent of the recipient, official letters can in future be received electronically and no longer need to be collected from the post office. The Raiffeisen Informatik Dual Delivery service allows for fully automatic dispatch and

receipt of all documents, thus avoiding media breaches and offering a more comfortable, faster and price efficient solution when compared with conventional delivery by the post office.

**Electronic law making process (eLaw) - [www.ris.bka.gv.at](http://www.ris.bka.gv.at) - WSA Nominee 2007**

Drafting legal texts were integrated into a contemporary electronic process. The basic concept of e-Law is to fully electronically perform the cycle of legal acts, from their first drafts, to their scrutiny, to their parliamentary handling and finally the authentic publication via Internet.

**Main Association of Austrian Security Institutions ([www.sozialversicherung.at](http://www.sozialversicherung.at))**  
Official e-Health interactive portal for all Austrian citizens

**E-BUSINESS**

**Remediation Check**  
The remediation check ([www.sanierungscheck.at](http://www.sanierungscheck.at)) offers a review of the rehabilitation needs for apartments and houses. The user will be step-by-step towards the optimal solution to rescue and the maximum energy-saving potential. Parallel calculates the program-specific local government subsidies and the best financing. To

ensure different requirements of each user, the rehabilitation check is divided into several modules. To operate as simply and clearly as possible, the platform was developed in a modern design and self-explanatory. Even users with low affinity to the Internet can use it click-by-click to an optimal solution.

**edelwiser - Interactive Ski Design - [www.edelwiser.com](http://www.edelwiser.com) - WSA Nominee 2007**

Edelwiser Skis will be designed by the customer with an online-design toolkit and produced in a mass-customization process. The individual product will be delivered within 48 hours to market prices.

**[www.win2day.at](http://www.win2day.at)**  
The multi channel game platform of Casinos Austria

**a1-lounge ([www.mobilkomaustria.com](http://www.mobilkomaustria.com))**  
In the digital content shops radio frequency identification chips inside the shopping cards make for a new and innovative shopping concept.

**Industrial safety materials ([www.schloffer.biz](http://www.schloffer.biz))**  
Produced and sold online in a business-to-business shopping platform

**E-CULTURE**

**springseven - Festival for**

**electronic art and music [www.springfestival.at/springseven](http://www.springfestival.at/springseven)** - Every year since 2001, the beautiful city of Graz has been transformed into a clubbing cultural hotspot for the spring festival, the biggest festival of its kind in Austria and her neighbouring countries. What started as 'springone - festival for electronic art and music' has considerably increased in size and scale each year. In 2007, springseven took place in 14 venues all over Graz, with more than 250 artists playing for almost 20,000 people, making it one of the most important modern music events in Central Europe. The website is an interactive multimedia platform before and after the festival.

**Acoustic Chronicle - [www.akustischechronik.at](http://www.akustischechronik.at) - WSA Nominee 2007**  
This is a virtual walk through the time and culture history of Austria from 1900 to 2000.

**Admont Monastery Museum ([www.stiftadmont.at](http://www.stiftadmont.at))**  
By means of the latest media techniques, visitors will be shown films about the life and rule of St. Benedict as also the history of the Monastery on interactive recall in three separate rooms.

**Technical Museum Vienna ([www.technischesmuseum.at](http://www.technischesmuseum.at))**

cards for students are in use at a number of universities as student service cards functioning as an ID, authentication, electronic signature, room access or copy counter, as well as electronic wallet.

e-Scholarships - Applications for scholarships can be filed by means of the student chip card and digital signature.

#### **e-Security:**

In early 1999, Austria had already adopted an action plan for the promotion of the secure use of the Internet, in order to combat efficiently illegal and detrimental contents. The so-called "European Safer Internet Action Plan" contributed to the establishment of an European network of reporting points ([www.saferInternet.at](http://www.saferInternet.at)) as well as to the production of a code of conduct for the service providers, the development of filtering and classification systems and the promotion of programmes of awareness.

#### **e-Inclusion:**

Websites of public authorities must be made accessible to everybody regardless of any physical or technical obstacles. Barrier free websites can be set up in accordance with the so-called "Web Accessibility Initiative" (WAI)-guidelines. By 1 January '2008, all websites of public authorities must be set up to comply with the needs of challenged persons.

**Q** How do you see the future of e-Content development in your country?

Within the context of European development, the rules of accessing and exploiting public sector information will have to be defined in a way that gives stability to all participants.

In the management of digital rights, not only will the laws have to be balanced, but also, on a pragmatic level, rights and licences will have to be efficiently and promptly cleared. The

conditions for micro-payments will have to be improved.

Attention will also have to be drawn to revenue sharing models being used by different kinds of network-operators. Such sharing should ultimately lead to innovative approaches and developments.

To sum up, Austria has an excellent future in e-Content. Not only is the Internet and mobile-penetration outstandingly high, so is the quality of networks both cable and wireless. There is great potential for cross media services in content-applications.

**Q** Please explain which medium is the most preferred medium for e-content development? Print? Or TV? Or Internet/Web? Or Radio? Or Mobile/Wireless? Or a combination of some of these?

The World Wide Web is the preferred

## Best Practices

### E-LEARNING

#### **E-DysGate**

Many people see dyslexia just as a reading and writing difficulty. But the problems that cause these difficulties also impact many other life skills. Internet-based exercises ([www.edysgate.org](http://www.edysgate.org)) can help to train specific skills of dyslexic persons. Such exercises are available, but the majority of them are focussed on children and do not address the specific underlying problems of young adults. Young dyslexic adults do not like them due to their

childish nature or because they seem irrelevant. This project looks to provide a highly motivating and stimulating learning environment (175 exercises in 5 languages) for a carefully selected range of skills known to be important for young dyslexic adults. It will address seven areas of particular importance for vocational skills development. The areas are targeted through direct and indirect stimulation. The principles behind the exercises are not specific for any given language - they will work for all individuals across Europe. The

exercises will be developed in collaboration with the user groups as well as those who train them.

#### **LEO - A rabbit from Lower Austria - WSA Nominee 2007**

The real time 3D PC game is a perfect combination from learning and playing for children.

"Adventure Forest" and "Squirrel, Wolf" interactive e-Learning CD-ROMs especially designed for young people.

**Nourishing detectives** ([www.ernaehrungsdetek-](http://www.ernaehrungsdetek-)

#### **tive.at**)

Comprise nearly 8,000 pupils from elementary schools in Austria, who go through the project and take their nutrition under the magnifying glass.

### E-GOVERNANCE

#### **Dual Delivery**

The principle of dual delivery ([www.meinbrief.at](http://www.meinbrief.at)) is founded on servicing both service paths - the electronic service via e-mail and physical service as a letter. Letters cannot always be electronically