PERSIAN GULF REGION CONCLUSIONS[429]

The commonly-held perception of uniformity within the Persian Gulf region, even to the point of overlooking the fact that Iran is not an Arab country, is quickly dispelled during the course of even such a cursory study of the region as the foregoing. While there are many commonalties, the variations in culture, religion, geography, Western orientation, and levels of technical expertise are striking. The region is far from homogeneous, making both analysis and policy formulation more difficult than might otherwise be the case.

There is a pertinent common element, however. All nine countries are characterized by strong forms of state control, including over the content and distribution of information.[430] The exact forms of control vary from country to country, usually deriving from the religious authorities, hereditary monarchies, or other oligarchic authorities. More so than in many other parts of the world, government control of telecommunications continues in the form of monopolistic providers. This pervasiveness of government control has in turn determined to a great extent another common element, that is the late arrival of the Internet in the region.

In almost all of the countries in this region, there is reluctance—usually but not only on the part of the government and religious authorities—to allow unrestricted access to the Internet. This has delayed the making of the first Internet connection in six of these countries (one of which—Saudi Arabia—still does not allow public access to the Internet), severely constrained the development of Internet infrastructure and services in another (Iran), and precluded making any connection at all in yet another (Iraq). The sole exception appears to be Yemen, which has more pressing concerns and where Internet access is so expensive as to be effectively denied to the public.

Yet, every country, save Iraq, has finally allowed a connection of some form to be made to the Internet and there is at least some Internet use in each of the eight countries currently connected. And most of the connections were made relatively recently and within a narrow time frame. Something has obviously changed, either in the nature of the Internet—perceived or actual, or in the government's perception of the "threat" and potential risk-mitigation options.

Emergence of the Web

A change in the nature of the Internet did occur in the mid-1990s, when World Wide Web browser technology matured enough to be attractive to the general public, resulting in a rapid proliferation of Web-accessible information in many parts of the world. This emergence of the Web as a mainstream resource was accompanied by a surge of publicity that has hardly diminished today. The resulting increase in the profile of the Internet and the fostering of the perceptions that not only was this a valuable resource, but one that no modern person, organization, or nation could do without, almost certainly generated interest in the Persian Gulf region, interest that, coupled with other circumstances, resulted in the creation or evolution of constituencies in favor of making an Internet connection. The existence and relative influence of constituencies, whether

[429] This section was summarized for publication in Grey E. Burkhart and Seymour E. Goodman, "The Internet Gains Acceptance in the Persian Gulf," *Communications of the ACM* 41 (March, 1998), pp. 19-25.

[430] Qatar may be emerging as the exception, with a surprisingly open media environment and having recently dissolved the state's censorship agency.

in favor of or opposed to this technology, appears to be one of the most important factors in getting connected.

Emergence of Constituencies

Reluctance, concern, or outright opposition to the Internet does not, however, mean that no change can take place. But there must be constituencies within the most important institutions of these societies acting as advocates of change. In many of the countries worldwide that were early to embrace the Internet, academics and other non-governmental, non-commercial organizations led the way, and the governments of those countries either provided support or at least did not oppose it. In the Persian Gulf countries, and many OIC nations more generally, when the Internet was in its early stages, there were no constituencies—certainly not the academics—powerful enough to make a case for its acceptance against the conservative concerns or lack of interest within the powerful national institutions.

The constituencies for negative perceptions of the Internet often include the military and internal security services, the Islamic religious ministries and clergy, and powerful families concerned with everything from the moral corruption of the nation's youth to threats against their privileged positions, although these players are not always uniformly critical. Past attempts by conservative elements to come to terms with global networking have included a Saudi-led effort to establish a restricted OIC-wide network, OICIS-Net, but after several years this still has not come to much.

With the growing worldwide spread and increasing commercialization of the Internet, other, more favorable, constituencies have arisen in these countries that seek its acceptance. These typically include younger members of key families, domestic businesses recognizing the need to operate internationally, foreign companies in-country, academics who have had exposure to global networking while they were abroad, and parts of government (e.g., the telecommunications monopolies) which seek their own opportunities. These have become important enough to warrant serious consideration, often resulting in committees of mixed players being tasked to look into the benefits and risks and to make recommendations to the governments. This was done most extensively and explicitly in Saudi Arabia. The net result has generally been cautious pro-Internet recommendations, based in part on the premise that technical solutions can acceptably mitigate the risks.

The Internet "Threat"

There is an overriding concern in each of the Persian Gulf countries on the part of their respective governments regarding their roles in public life, relationships with the governed, and their stability and survival. These are in turn related to a broader set of national concerns, such as the maintenance of cultural integrity and social values. Such concerns about the Internet exist elsewhere in the world, including such leading Western countries as France, Germany, and the United States. But no place else in the world, including such talked-about countries as Singapore or the People's Republic of China, seems to have as many concerns or take them as seriously as in the Persian Gulf.

As these countries inevitably modernize, with however much local adaptation and variation, the relationship between the governors and governed, what the people expect from their leaders, will change with equal inevitability and possibly greater variation. The very notion of people expecting something from their leaders, that is of government responsibility, is not yet fully accepted in all countries. The exclusive possession and employment of information is a traditional source of

government power in the region, and to the extent that the Internet threatens this exclusivity, the governments may either have to adopt other means of control or adapt to a new relationship with the populace. The former implies repression of some sort, in which case it is more logical to start with repression of the Internet along with other sources of information. What the latter implies is not yet clear to the region's governments and hence a source of concern.

National security concerns in these countries extend beyond the traditional definition of military threats from foreign countries. In effect they include anything that is a threat to the ruling institutions and their interests, such as their claims to the right to rule (e.g., as defenders of Islam and Arab cultural values) or their financial interests. Stated concerns include fears that wide area computer networks will be used by terrorists, the potential vulnerability of businesses becoming dependent upon information accessible via the Internet and the security of business communications, the spreading of propaganda (false or otherwise) by political opposition groups in exile, and foreign information warfare and intelligence operations.

Not surprisingly, the concerns about what information and communication via the Internet may do to national, cultural, and religious values surface more readily than those relating to national security. A number have been brought out in the press and in our interviews with government, business, academic, religious, and private individuals from these countries, including the availability of pornography (almost always first and foremost) and other un-Islamic information (such as how to commit suicide), proselytization by other religions, the potential effects on women's role in society, dilution of local cultural norms, and problems related to the lack of local language resources on the mostly-English Internet.

Threat Mitigation

In the simplest cases, some countries have decided to ignore or discount the potential risks of an Internet connection. For instance, it can easily be argued that the Internet is not the greatest threat facing the Yemeni government or people at this juncture. While the potential benefits of its Internet connection have yet to be realized, the marginal cost to the government is nil and certain constituencies have been satisfied. The authorities in Qatar, for instance, decided that in the absence of any internal or external threats to its security, they could discontinue censorship and cease to worry about the issue.

At the other end of the spectrum are the countries that take the threat most seriously, such as Iran, Iraq, and Saudi Arabia. In Iraq's case, the government's response has been to refuse to connect. In Iran and Saudi Arabia, however, there exist constituencies that recognize the potential benefits of an Internet connection and, unlike Iraq, both countries can well afford the monetary costs. But in both countries, the government has not made a clear policy decision, although Saudi Arabia appears closer to that point at present.

In between, the response has been to implement some form of technical control over Internet access, admitting that such a security arrangement is imperfect but accepting any remaining risk as either negligible or amenable to mitigation by other means. As these countries continue to enjoy the benefits of Internet connections and integrate them more closely into their social and commercial functioning, to the extent that there are no serious untoward events, it is conceivable that controls will be relaxed, or at least not up-dated so that a given level of control can keep pace with technology.

Tab G **Persian Gulf Glossary**

AED	Arab Emirates (UAE) Dirham
AGCC	Arab Gulf Cooperation Council
ART	Arab Radio & Television Company (Saudi Arabia)
Batelco	Bahrain Telecommunications Corporation—The monopoly telelcommunications services operator and only ISP, of which 60 percent of the stock is owned by the Bahraini government [check] and 40 percent by Cable & Wireless (UK). There have been rumors that the government might sell off some of its holdings, but it will certainly retain a minimum level of ownership (10-25 percent) that will allow the government to continue to dominate certain aspects of Batelco's operations. Competition to Batelco has not been contemplated. Batelco maintains that there is no need for privatization of the company, since the government is not the sole shareholder. Batelco is the *.bh* national TLD manager.
BITS	Bahrain Information Technology Society
CDLR	Council for the Defense of Legitimate Rights—A dissident group, based in London, opposed to the current government of Saudi Arabia
DCI	Data Communication Company of Iran—The monopoly provider of non-voice communications services in Iran. The DCI operates a nationwide X.25 network, *Iranpac*, on the basis of which it is establishing public Internet services. Owned by the MPTT, this is the sister company of the TCI (*q.v.*).
EARN	European Academic Research Network (see TERENA)
Etisalat	Emirates Telecommunications Corporation—The monopoly telecommunications services provider and ISP in the UAE. Etisalat is the *.ae* national TLD manager.
FOG	Fiber Optic Gulf—A submarine fiber optic cable network connecting Bahrain, Kuwait, Oman, and the UAE. This system also connects the first three countries to the SEA-ME-WE systems via the UAE.
GCC	Gulf Cooperation Council
GPC	General People's Congress (Yemen)—The ruling political party in Yemen, formerly the ruling party of the Yemen Arab Republic (North Yemen).
GTO	General Telecommunications Organization (Oman)—The monopoly telecommunications services provider and ISP in Oman. The GTO is the *.om* national TLD manager.
IMED	International Medical and Educational Data (Link)—An ISP in Bethesda, Maryland.
INC	Iraqi National Congress

IPM	Institute for Studies in Theoretical Physics and Mathematics (Iran)—A leading academic institute in Tehran that established the first BITNET network and international link, followed by the first international IP link to the Internet. IPM is the *.ir* national TLD manager.
IRNA	Islamic Republic News Agency—Iran's official news agency and wire service.
KAAU	King Abdulaziz University (Jeddah, Saudi Arabia)
KACST	King Abdulaziz City for Science and Technology (Riyadh, Saudi Arabia)—KACST is the *.sa* national TLD manager.
KEMS	Kuwait Electronics Messaging Services
KFSHRC	King Faisal Specialist Hospital and Research Center (Riyadh, Saudi Arabia)
KFUPM	King Fahd University of Petroleum and Minerals (Dhahran, Saudi Arabia)
KSA	The Kingdom of Saudi Arabia
KSU	King Saud University (Riyadh, Saudi Arabia)
MKO	*Mojahedin-e Khalq* Organization—An Iranian opposition group headquartered in Iraq. The group espouses a combination of Marxist and Shi'ite Islamic philosophy and the separation of religious and government power.[431]
MPTT	Ministry of PTT (Iran)—Establishes policy relevant to telecommunications operations and industry and oversees its implementation in Iran. The MPTT has over 50,000 employees, making it the sixth largest ministry. It is the parent organization for the telephone operating companies, the most important of which is the Telecommunication Company of Iran, the country's 24 local operating companies in the provinces, and the Data Communications Company of Iran. The MPTT also owns the major telecommunications industrial and research and development enterprises.
NASS	Network Analysis Support Services (Yemen)
NCRI	Networking and Communications Research and Infrastructure—A division of the National Science Foundation.
NRI	Neda Rayaneh Institute—The first and still the largest commercial ISP in Iran, with a mirror Web site in the United States.
OIC	Organization of the Islamic Conference
OICIS-NET	OIC Information Systems Network
PAAET	Public Authority for Applied Education and Training (Kuwait)
PKK	Kurdistan Workers' Party
PTA	Parents-Teachers Association

[431] Helen Chapin Metz, ed., *Iran: a country study* (Washington, D.C.: Government Printing Office, 1989), pp. 291-292.

PTC	Public Telecommunications Corporation (Yemen)—The monopoly domestic telecommunications services provider in Yemen.
PUK	Patriotic Union of Kurdistan
QR	Qatari Riyal
Q-Tel	Qatar Public Telecommunications Corporation—The monopoly telecommunications services provider and ISP in Qatar. Q-Tel is the *.qa* national TLD manager.
RDC	Regional Documentation Center—Baghdad-based library and database manager for the Arab Gulf Cooperation Council
RITSEC	Regional Information Technology Systems Engineering Center (Cairo, Egypt)
RO	Omani Riyals
SCIRI	Supreme Council for the Islamic Revolution in Iraq
SCS	Saudi Computer Society
SEA-ME-WE	South East Asia-Middle East-Western Europe—Submarine communications cable systems. SEA-ME-WE 1 is an analog network based on coaxial metallic cable, while SEA-ME-WE 2 and 3 are digital networks based on fiber optic cables. The UAE and Saudi Arabia have direct connection to the latter two systems.
STC	Saudi Telecommunications Company—The monopoly telecommunications services provider in Saudi Arabia.
TAE	Trans-Asia-Europe—The "Silk Road" fiber optic network connecting Shanghai, PRC, with Frankfurt-am-Main, FRG.
TCI	Telecommunication Company of Iran—A wholly-owned operating company of the MPTT with responsibility for planning, installation, and operation of telecommunications nationwide. It is the long distance (toll) carrier, and oversees and coordinates the operations of the provincial operating companies. Headquartered in Tehran, TCI maintains ten regional offices. It is part owner of the MPTT's two principal industrial enterprises, the Iran Telecommunication Manufacturing Company and Iran Telecommunication Industries, and also operates the Iran Telecommunication Research Center.
TeleYemen	Yemen International Telecommunications Company—The monopoly international telecommunications services provider and ISP in Yemen. TeleYemen is the *.ye* national TLD manager.
TEP	Telecommunications Expansion Project (Saudi Arabia)
TERENA	Trans-European Research and Educational Networking Association—A network using BITNET technology connecting universities and research labs in Europe.[432] (formerly EARN)
UAE	United Arab Emirates

[432] *ibid.*

UST	University of Science and Technology (Yemen)
YR	Yemeni Rial