At IBC 2008, Dr. F. Lubbadeh submitted the following presentation at the session MENA - The Growing Market on the Developments of Broadcast and Telecom Markets in the Arab World.

Arab World -The Growing Economy.

The Arab World has one of the highest rates of population growth in the world and has a young population with one third of the population between the ages of 10 and 24. The region has in recent years experienced high economic growth, specially in the oil producing countries thanks to record-high crude oil prices .The balance of oil –dominant economies is expected to reach 132 billion in 2008 from \$77bn during 2007. Foreign direct investments registered \$30.5bn in 2007, half of which was attracted by Saudi Arabia, Egypt and UAE. The average labor force growth has reached an average of 3.4% per year between 2002 and 2007, and unemployment dropped from more than 15% in 2000 to 11% in 2007.

The Arab World's Gross Domestic Product (GDP) growth stepped to a 12 year high of 5.7% in 2007, compared to a World GDP growth of 3.7% in 2007. It is anticipated by the World Bank that the GDP growth will average 5 - 6% in the Gulf countries during the next years. GDP advances are also anticipated to average 6% beyond 2008 in diversified countries such as Morocco, Egypt, Tunisia, Jordan & Lebanon, as a result of services exports and increasing Pan Arab & foreign direct investment in other sectors such as banking, manufacturing, real estate, tourism and transportation.

Over the last years, National & Pan Arab investments attracted by liberalization, deregulation & privatization in the broadcasting industry resulted in a major increase of radio broadcasting & FTA TV channels, Pay TV networks & advertising revenues & in massive growth of television & cinema production. The telecom sector has been witnessing a compound annual growth rate of 44% in terms of telecom subscribers and mobile penetration rates. Telecom investment activities have increased considerably growing from US\$ 5bn in 2004 to US\$ 20.6bn in 2007.

Radio Broadcasting

Arab radio broadcasting started in 1920s. Most Arab States established their own radio broadcasting after 1945. By 1970s, each had its own radio station. Egypt has been a leader in radio broadcasting from the beginning. In 1970s, Egyptian radio had (14) different broadcast services, including (6) for foreign audiences, staffed by more than (4,500) employees. With a total air time of (1,200) hours per week, Egypt ranked 3rd in the world among radio broadcasters.

Until the early 1990s, broadcast in the Arab world had been dominantly state-controlled, operating as part of government information departments. Since then, governments have presented their broadcasting services as the best champions of the public interest. Meanwhile, non-state broadcasters have struggled to establish a foothold in the regional Arab media market by offering western-style contents and formats.

Liberalization in several Arab countries was a key factor in creating the boom in private FM radio stations, in addition to the need to broadcast in multiple languages to cater to the huge expatriate population and ethnic groups. From February 2007 till April 2008, the number of FM radio stations in the Arab world has increased by 50% reaching (316), out of which (157) are local state-owned FM radio stations, (150) are local private, and (9) are regional ones broadcasting in multiple countries.

Algeria and the UAE have the highest number of local government-owned FM radio stations while Palestine, Iraq and Lebanon have the highest number of private local radio stations. Bahrain, Kuwait and Oman have allowed private radio stations only recently.

An analysis of FM radio advertising rates in the Arab world shows that the Pan Arab average advertising rates are usually higher than the local averages, due to the fact that they cater to Saudi Arabia, the biggest consumer market in the Arab world with limited competition from local FM stations. The peak timings where the advertising rates are at their highest correspond to driving times to and from work.

Television Broadcasting

Television Broadcasting in the Arab World first began during the late 1950s in Iraq and Lebanon. 13 other Arab countries followed during the 1960s. North Yemen was the last to join in 1975. Currently, 120 terrestrial TV channels are broadcast in the Arab countries, the majority of which are dominated by governments. Only Iraq, Palestine, Lebanon, Tunisia and Jordan allow private terrestrial channels. Terrestrial TV still have a relatively large audience, but it is much reduced by the boom of free to air FTA satellite channels.

TV in the Arab World benefits from several encouraging factors, such as common language and culture, a tradition of high TV consumption, an expanding and young population, which create a media positive environment, resulting in a massive growth of FTA & Pay TV market and in a major increase of TV production & advertising revenues

The number of satellite FTA channels has increased more than 275% from January 2004 to April 2008. Out of 377 FTA channels broadcast on Arabsat, Nilesat & Noorsat, 56 channels are private sector general channels, 54 are Muslim channels, and 38 are government owned general channels. 243 FTA channels have online presence (website or a portal tied to the channel) Statistics show that about 90% of TV viewing in the Middle East is via satellite, mostly free to air. Egypt's satellite viewing is stated as 49% and that is due to signal theft via neighborhood piracy links. Lebanon's DTH viewing is also low because the country is cabled and piracy is widely spread.

Satellite Pay TV operators include:

- ORBIT (48 plus 4 Pay Per View TV channels)

- 1. ART (42 channels)
- 2. Showtime (36 plus 10 Pay Per View channels)
- 3. Aljazeera Sports (4 + 2 FTA channels)
- 4. Al-Majd & Star

Piracy and illegal black market connections in several countries have resulted in a quite high use of Pay TV services, with 43% of households in Egypt having Pay TV access at very low cost.

Free-Zone media cities, providing production and broadcasting services, have been established in Egypt, Jordan and UAE. Having exemptions from customs, taxes and duties, these free-zones attracted Arab media companies to migrate from Europe back to the Arab world and helped in creating job opportunities and encouraging foreign and Pan-Arab investments.

TV production in the region has been increased substantially during the recent years. The number of television series (drama, comedy, historical..) produced for presentation in the holy month of Ramadan this year has exceeded 120 (45 Syrian, 44 Egyptian, 13 Jordanian, 13 Saudi).

The number of Arabic produced reality TV shows is also increasing across the region. Programs like Star Academy, Super Star & Prince of Poets are becoming fairly popular from Morocco to

UAE, creating a new business model, premised less on ratings and more on paid viewer participation (interactivity).

More & more TV & radio channels are being distributed on internet, thus providing more opportunities for new players in the broadcasting market. Arab video sharing websites are becoming popular in the region. In addition to user generated media content, competitions are hosted and winners are selected by a panel of judges and by public SMS Voting: A satellite TV station will be launched this year with 100% user generated content.

The transition from analogue to digital television has taken place in TV production, post production, and satellite transmission all over the Arab world. Switchover to DTTB has not been implemented yet, with the exception of Saudi Arabia where digital terrestrial transmission of (5) TV channels has been established since 2006.

Although, major broadcasters in the Arab world have upgraded their production and transmission infrastructure to support HDTV, the costs of switching to HDTV are higher than the expected increase in advertising and subscriber revenues (they claim).

Al-Jazeera International Satellite channel offered HDTV when it was launched in 2006. Some world cup 2006 matches were shown on Nilesat by ART in HDTV, Euro 2008 and Beijing Olympics were transmitted on Al-Jazeera standard and high definition channels. So far, this did little to help HDTV penetration in the region. Nevertheless, the consumer market is invaded by Plazma, LCD and DMD screens, many of which are HD ready.

Regional Satellite Operators

Arabsat organization was founded in 1976 by the 21 member states of the Arab League. Operating 4 satellites at 26°E (BADR 6;4;3), and at 30.5°E (Arabsat 2B), Arabsat offers broadcast, telecommunications and broadband services. Currently, Arabsat carries 350+ TV channels and 160+ Radio stations.

Egyptian Nilesat 101 at 7° West was launched in 1998, Nilesat 102 in 2000, and Nilesat 103 (Hot Bird 4 relocated to 7° W) in 2006. Nilesat provides broadcasting and high speed data transmission services. It delivers more than 400 TV and 100 audio channels.

Noorsat, launched in 2005, currently transmits more than 100 TV channels on its 3 DTH satellites: Noorsat 1 (Eurobird 2) at 25.5°E, Noorsat 2 (Atlantic Bird 4) at 7°W, and Noorsat 3 (Altantic Bird 2) at 8°W.

In the near future:

- Arabsat will launch one new satellite per year from 2008 till 2011
- Nilesat will launch a new satellite in 2009

- Yahsat, UAE national satellite, will be launched in 2010 at 52.5° E, providing tri band (K, Ku, C) coverage of 85 countries in the Middle East, Africa, Europe and South West Asia.

Internet Usage in the Arab World

Only 1/5 of the world's population has regular Internet online connectivity, and only 43 countries have an Internet penetration rate of 50% or more; 226 countries do not. The low rate of PC & Internet penetration is often attributed to the high costs of PCs and Internet services.

Item	Arab	Population	Usage in	Internet	%	(%) of	Use
	Countries	March 2008	Dec-2000	Usage,	Population	Arab	Growth
				Latest Data	Penetration	Countries	2000 -

							2008
1	Algeria	33,769,669	50,000	3,500,000	10.36%	9.14%	6,900%
2	Bahrain	718,306	40,000	250,000	34.80%	0.65%	525%
3	Comoros	731,775	1,500	21,000	2.86%	0.05%	1,300%
4	Djibouti	506,221	1,400	11,000	2.17%	0.03%	685%
5	Egypt	81,713,517	450,000	8,620,000	10.55%	22.50%	1,815%
6	Iraq	28,221,181	12,500	54,000	0.19%	0.14%	332%
7	Jordan	6,198,677	127,300	1,126,700	18.17%	2.94%	785%
8	Kuwait	2,596,799	150,000	900,000	34.66%	2.35%	500%
9	Lebanon	3,971,941	300,000	950,000	23.91%	2.48%	216%
10	Libya	6,173,579	10,000	260,000	4.21%	0.86%	2,500%
11	Mauritania	a 3,364,940	5,000	30,000	0.89%	0.08%	500%
12	Morocco	34,343,219	100,000	7,300,000	21.25%	19.06%	7,200%
13	Oman	3,311,640	90,000	300,000	9.06%	0.78%	233%
14	Palestine	2,611,904	35,000	355,500	13.61%	0.93%	915%
15	Qatar	928,635	30,000	351,000	37.80%	0.92%	1,070%
16	Saudi	28,161,417	200,000	6,200,000	22.00%	16.19%	3,000%
17	Syria	19,747,586	30,000	2,132,000	10.79%	5.56%	7,006%
18	Somalia	9,558,660	200	98,000	1.02%	0.25%	48,900%
19	Sudan	40,218,455	30,000	1,500,000	3.73%	3.91%	4,900%
20	Tunisia	10,383,577	100,000	1,722,200	16.58%	4.50%	1,622%
21	UAE	4,621,399	735	2,300,000	42.90%	6.00%	213%
22	Yemen	23,013,376	15,000	320,000	1.40%	0.83%	2,035%
	Total	344,866,479	2,512,900	38,301,400	11.10%	100.00%	1,424%

Table of Internet penetration in the Arab countries shows that the highest penetration is in UAE (42.9%), Qatar (37.8%), Bahrain (34.8%), Kuwait (34.66%), Lebanon (23.91%), Saudi (22%), Morocco (21.25%).

The penetration of Internet is extremely low in Iraq (0.19%), Mauritania (0.89%), Somalia (1.02%), Yemen (1.14%), Djibouti (2.17%), Comoros (2.86%), Sudan (3.73%) and Libya (4.21%). The highest of Internet users is in Egypt (8,620,000), Morocco (7,300,000), Saudi (6,200,000), Algeria (3,500,000) and UAE (2,300,000).

In comparison with an Average Internet World Penetration of 21.1%, the Internet Population Penetration in the Arab World stood at 11.1% in March 2008:

	Population March 2008	Population % of World	Internet Users	% Population Penetration	Usage % of World
Arab World	344,866,479	5.16%	38,301,460	11.1%	2.72%
World Total	6,676,120,288	100%	1,407,724,920	21.1%	100%

Efforts by Arab countries to become active information societies and to introduce e-applications have been slow & have not yet yielded the awaited results. Reasons for the slow development of IT in the region include the lack of qualified personnel; the very low investment (0.2% of GDP) in RDI; the lack of Internet Arabic content, currently estimated at 0.5% of global online content (even though Arabic is the sixth spoken language in the world); the limited capital investment in IT; the limited private sector activity; and the lack of cooperation between governments and business sectors.

Despite disputes over the role of government in a market economy, government led initiatives can promote successful IT deployment. A number of initiatives has been launched in various Arab countries (Egypt, Jordan, the Gulf countries..) to utilize IT in education, health & E-government services. IT development success requires market liberalization & competition, private sector participation, and effective regulation.

IPTV

The number of IPTV subscribers worldwide has increased 53% in the last months. Europe accounts 8.4m subscribers, Asia-Pacific 2.6m, North America 2.3m, and South East Asia 1.4m.

In the Arab World, only operators in the UAE, Qatar and Morocco provide commercial IPTV services. Egypt, Saudi Arabia, Bahrain & Kuwait are planning to launch IPTV services this year or in the near future.

The internet two-way nature of IP-based broadband networks offers exciting possibilities for interactivity, thus providing Video-On-Demand, and Pay-Per-View, TV shopping, gaming and video conferencing services.

Cellular Penetration

There are three billion cell phone subscribers worldwide (three times the number of PC users). In Japan and Korea, 90 percent of cell phone users use their device to browse the internet. In the near future the Internet will be more frequently accessed on mobile phones than on personal computers.

At the end of 2007, the UAE had the highest mobile penetration ratio in the Arab World of 173 mobiles to each 100 people, i.e. a total of 7.6 million sets. This figure is more than triple of both the world average of 49.3 / 100, and of the Arab world average of 50.8 / 100.

Country	Cellular Penetration	No. of Mobiles	
UAE	173%	7.6m	
Qatar	150%	1.44m	
Bahrain	148%	1.06m	
Saudi Arabia	115%	32.3m	
Kuwait	97.2%	6.02m	
Oman	96%	3.19m	
Jordan	80%	4.99m	
Tunisia	76%	7.84m	
Libya	73%	4.50m	
Morocco	64%	20.03m	
Algeria	63%	21.44m	
Egypt	43%	35.13m	
Mauritania	42%	1.41m	

Syria	33%	7.5m	
Lebanon	30%	1.19m	

The lowest cellular penetration is in Somalia (6.8%) and Djibouti (5.4%). The highest annual growth average is in Iraq (270%).

The liberalization of mobile telecommunications has had a positive impact on the economics of the region, namely in the higher penetration rates, lower prices and higher share in the country's GDP. The impact can also be measured in terms of greater investments, creation of more jobs and greater integration into the global economy.

3G Mobile Services

3G mobile phone commercial services are offered by 19 operators in 12 Arabic countries (Bahrain, Egypt, Iraq, Kuwait, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan and UAE)

The services offered include mobile broadband internet, local and international video calling, mobile TV, video mail, video monitoring, live audio and video streaming. The current penetration of 3G mobile is still low, but the total number of subscribers is expected to increase with an annual growth rate of 60%.

Mobile TV

Mobile TV has been launched in a number of Arabic countries like Saudi Arabia, UAE, Bahrain; Kuwait...1.8m is the number of subscribers to 3.5G services offered by Saudi Arabian telecom operator Mobily. Subscribers have access to video clips; video conversation, television channels, high speed internet and games. In the UAE, both Etisalat and Du operators are offering mobile TV services since February 2007, with a wide range of channels offering news, sports & entertainment.

Success of Mobile TV service requires the allocation of channels with easy switching between them, high quality video and audio and a long lasting mobile's battery life. Availability of a minimum of 2 Mux (16MHz) per country would be ideal for the success of Mobile TV. But content is the most important factor: <u>content is king</u>, and it has to be designed or repurposed for Mobile TV applications.

The regulatory framework for licensing of Mobile TV services is a key factor in enabling investments in network deployment and services. Currently, no spectrum is allocated globally for Mobile TV broadcast, and it is subject to national regulations. One of the future possible sources of spectrum for Mobile TV is the digital dividend release of UHF band afforded by the switchover from analogue to digital broadcasting.

In addition to terrestrial solutions, S2M service is scheduled to launch at the end of this year. The satellite will broadcast the content directly to devices including mobile phones. A terrestrial network of gap fillers will also be deployed

Broadband Penetration

Fixed line broadband penetration in the Arabic countries is low compared to world standards. Statistics of 2007 indicate that broadband penetrations is 8% in Qatar, 7.8% in UAE, 7% in Bahrain, 2.4% in Saudi Arabia, 1.6% in Jordan, 1.5% in Palestine & Morocco, 1.1% in Tunisia, 1% in Lebanon, 0.9% in Algeria, 0.7% in Oman, 0.6% in Egypt, 0.1% in Mauritania, 0.05% in Yemen, 0.04% in Syria and 0.02% in Sudan.

In some countries (ex. Egypt), the effective household broadband penetration is higher than

indicated due to higher number of people per household & line sharing of the ADSL connection between neighbors.

But, demand for broadband is growing in the region, driven by greater availability of and demand for digital content, youth market, increasing regional prosperity, competition and network technology advancements .New challenges are being faced by operators and various differentiating elements are observed in their marketing strategies. These include offering value added services, providing pay-as-you-go schemes targeted at lower end users, offering guaranteed quality of service and broadband fixed & mobile technology choices

WiMAX

WiMAX has been deployed in a number of Arabic countries, beginning in 2005 with Algeria, mountainous terrain of which makes it an ideal candidate for wireless connectivity solutions, including BWA, VoIP & VPN. In 2007 Kuwait implemented WiMAX to offer a range of connectivity services to enterprises, small businesses and residential users in urban and rural areas throughout the country. The applications included WAN/LAN access, interactive distance learning, video conferencing. Agreements have been signed for establishing WiMAX network in Saudi and Libya, and for adding hundreds of Wi-Fi hotspot locations within the UAE.

Total Country Connectivity Measure

Recent 2008 annual results of Arab Advisers Group's Total Country Connectivity Measure (TCCM), *calculated by adding the house hold fixed lines penetration, cellular penetration and Internet users penetration rates in each country*, give UAE rank no. 1 in the Arab World (1.38m fixed-line subscribers, 7.6m mobile & 2.3m internet users, of 4.5m population). The six oil-rich Gulf Cooperation Council (GCC) countries lead connectivity in the region as these fast growing economies invest billions of dollars in expanding their telecom infrastructure.

	Country	TCCM Score	Rank	Country	TCCM Score
Rank					
1-	UAE	330%	2-	Bahrain	210%
3-	Saudi	208%	4-	Qatar	193%
5-	Kuwait	165%	6-	Libya	162%
7-	Oman	154%	8-	Jordan	134%
9-	Algeria	131%	10-	Lebanon	125%
11-	Tunisia	123%	12-	Syria	123%
13-	Egypt	112%	14-	Morocco	107%
15-	Palestine	91%	16-	Iraq	77%
17-	Mauritania	55%	18-	Yemen	47%
19-	Sudan	29%			

Content Regulation

All over the world, regulation lags significantly behind industry developments. Broadcasting regulation deals mainly with spectrum and national ownership, but little has been done with regard to content, specially broadcast via internet or mobile telephony...

In February 2008, the Arab Ministers of Information adopted the charter for "Principles" for organizing satellite TV in the Arab World (only Qatar and Lebanon did not sign). The charter authorizes signatory countries to withdraw, freeze and revoke the broadcasting license of any channel that breaks the regulations.

Internet online content is filtered either broadly or selectively in various Arab countries. Political filtering is the common dominator. Most of the sites blocked are selected because of cultural, social and religious concerns.

Arab Cinema

The Egyptian cinema has always dominated the screen with its production of mass audience films. The 1st Egyptian film (Leila) was produced in 1927. Egypt's cinema really took off with the introduction of sound during the 1930s. Arab women directors played a major role in film production as early as 1930s, many years before European women were systemically involved in the industry.

In the 1970s, Egypt produced an average of 80 movies a year .The movie industry suffered from competition of video in the 1980s and satellite DTH in the 1990s. By the end of the 20th century, Arab cinema has produced over 4500 films in feature length alone, not including documentaries and short films.

40 feature films were produced in Egypt last year, in comparison with 16 movies produced in 1997. Box office records in Egypt have also risen significantly, as Egyptian movies in 2007 earned 50m\$, while American movies earned only 10m\$.

Movies are being also produced in Algeria, Lebanon, Morocco, Palestine, Syria, Tunisia & Jordan.

Challenges and Opportunities

The Arab World is a growing market in terms of broadcasting and telecom markets & services. Challenges to the broadcasting sector include the complete transition from analogue to digital in both production & transmission environments & the implementation of HDTV & digital cinema. Telecom and broadband internet sectors in the Arabian Gulf are expected to generate \$70bn in annual sales revenue in 2015.Over the next decade, the GCC countries are planning to spend approximately 25% of their infrastructure development funds on expansion of ICT.

Telecom operators in the region rely on geographic expansion as a principal source for growth. Kuwaiti Zain Intl extended its operations to 22 countries in MENA & Africa; UAE's Etisalat footprint extends from Cote D'Ivoire to Pakistan; Egypt Orascom stretches from Italy to Africa, Pakistan & North Korea.

Convergence of broadcasting & ICT industries provides new medium for content delivery and offers exciting interactive & on demand services which represent real business opportunities for both industries.