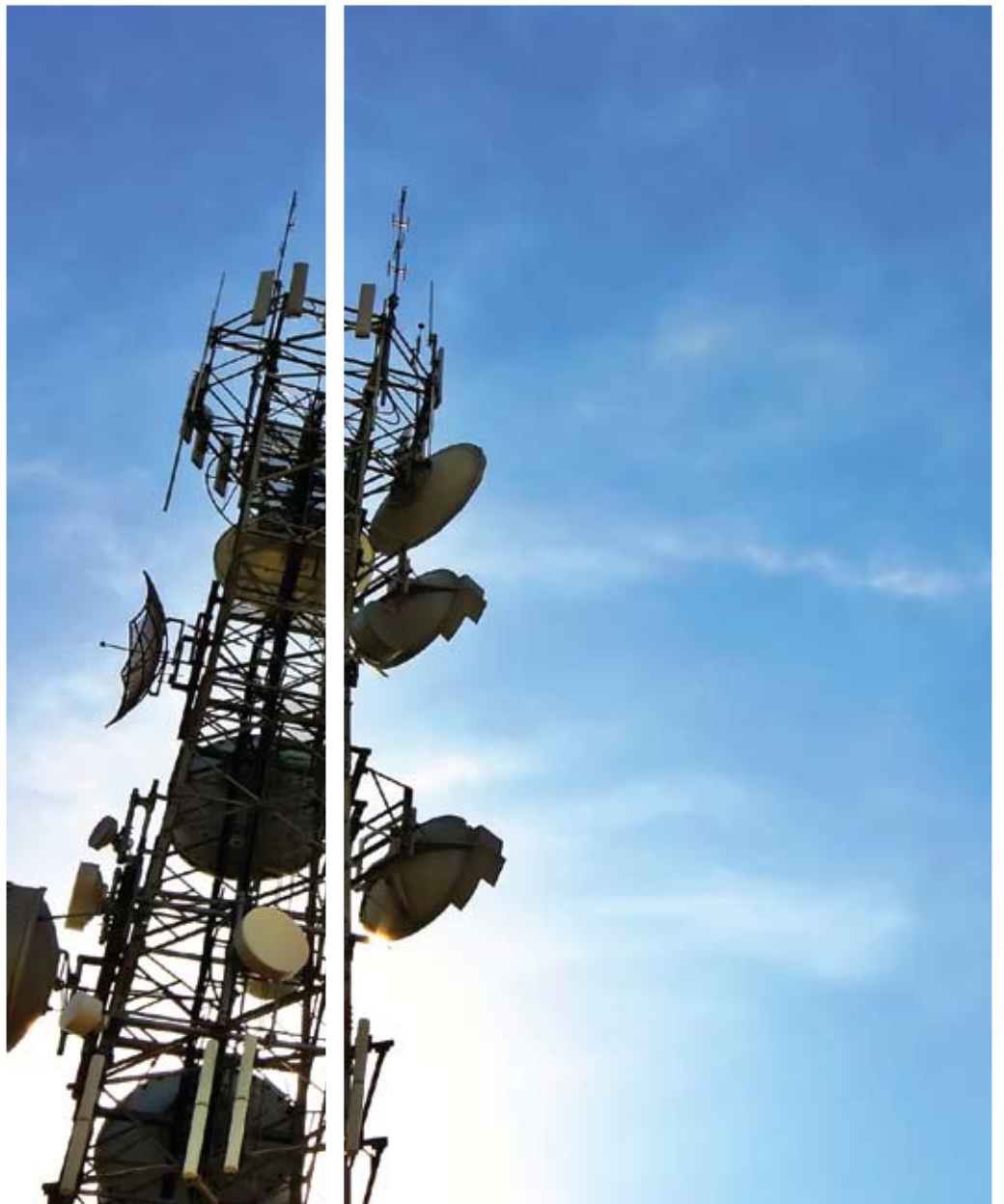


Annual Report **2008**



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Annual Report **2008**

A composite image showing space shuttle components in orbit. The top portion features a solar panel array against the Earth's horizon. The bottom portion shows two large, cylindrical external tank segments with various yellow support struts. A white text box with a purple border is overlaid on the right side, containing the title. Three vertical bars in teal, purple, and teal are positioned to the left of the text box.

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LETTER FROM THE CHAIRMAN

The Telecommunications Regulatory Authority has been engaged the last two years in preparing to liberalize telecommunications and implementing Law 431/2002. With the help of a first-rate and highly dedicated team, and in coordination with various ministries, government agencies, and civil society, the Authority has been able to make significant progress towards assuming the mandate given to it by Law 431/2002. However, the political and economic conditions prevailing in the country as well as the delay in establishing Liban Telecom, privatizing the two mobile operations, and creating the directorate general of telecommunications at the Ministry of Telecommunications (to replace the current two directorates which are to be merged into Liban Telecom) have hindered the ability of the Authority to deliver on the promise of Law 431/2002, which is to create a dynamic and competitive telecommunications market.

The Authority is pleased to present the 2008 TRA Annual Report. Despite political (i.e., due to the country's political conditions) and policy obstacles, the Authority was able to make important progress towards the reform and liberalization of telecommunications.

The TRA has made progress in the promotion of consumer protection, in building a best-in-class regulatory framework, and in gradually increasing the scope for competition in 2008. Consumer protection has been one of our main priorities. The Authority has entered into a Memorandum of Understanding with the Ministry of Economy and Trade in order to better serve users of telecommunications services. The MoU provides for seamless coordination between the Authority and the Ministry of Economy's Consumer Protection Directorate to handle complaints in a timely and seamless manner. Furthermore, in 2008, the Authority worked with stakeholders to finalize the draft Consumer Affairs Regulation (which is intended to be approved by the Board in 2009). Of more immediate relevance, the Authority has also taken the lead in combating interference from unauthorized users of jammers and repeaters, which were leading to deterioration in the quality of mobile services. Finally, the Authority has provided recommendations to the Ministry of Telecommunications to take measures to avoid the re-emergence of a black market in mobile SIM and recharge cards.


The Authority's efforts in building a solid and best-in-class regulatory framework for telecommunications have been quite productive. During 2008, the Authority has carried

out more than 13 public consultations on new regulations, policies, and decisions. One of these regulations has been on the Access to Information, which holds the Authority to the highest standards of disclosure of information to the public. The key regulations approved in 2008 are: Quality of Service and Key Performance Indicators Regulation, Significant Market Power Regulation, Interconnection Regulation, Type Approval Regulation, Lebanese National Frequency Table, Pricing Regulation, Service Providers Licensing Regulation, Spectrum Management and Licensing Regulation, Class and Frequency Licensing Fees Regulation, Access to Information Regulation, Numbering Regulation and the Regulatory Framework for the Establishment of Call Centers in Lebanon.

Progress in the liberalization of telecommunications has been slowed down by the delay in implementing the structural reforms that require decisions by the Council of Ministers. The licensing and privatization of the mobile network assets, a necessary requirement to introducing competition in the mobile market, was suspended and has not yet been resumed. On the other hand, the preparation for the liberalization of broadband services has proceeded apace, with the greatest priority being given to providing access to broadband Service Providers to the rights of way, public property, and especially the existing ducts and conduits. The Authority firmly believes that the success of this effort will determine whether Lebanon will catch up with other countries in the provision of leading-edge broadband services. Finally, the Authority worked in 2008 to ensure that Liban Telecom, when established, will be able to compete and succeed in a rapidly evolving global telecommunications market.

Our aim for 2009 is to liberalize the market for key telecommunications services, namely mobile, broadband, and international. Most notably, we plan to issue new licenses to Internet and Data Service Providers as well as new National Broadband Carrier licenses. The Authority will also issue a license for "Liban Telecom" as soon as it is established.

The Authority also looks forward to finalizing the National Numbering Plan, the Number Management Regulation, the Licensing Regulation, and the Spectrum Management and Licensing Regulations and a number of other regulations in 2009. In addition, it will prepare a number of draft decrees for the Council of Ministers which are critical to the success of broadband in Lebanon, namely: the Spectrum Right to Use Fees; the Access to



“Telecommunications can become Lebanon’s engine for economic growth and competitiveness and a viable and renewable source of economic prosperity.”



Public Property and Rights of Way; and the New Building Requirements. These decrees will send a strong signal to the telecommunications market that the Government of Lebanon considers broadband a priority and that it will spare no effort to allow every Lebanese access to state-of-the-art broadband services.

The Authority’s priorities in 2009 will also include a number of capacity-building measures which will allow it to better fulfill its mandate. First and foremost, the Authority will build on the budget it has prepared for 2009 to achieve a greater degree of financial autonomy and secure a significant source of revenues from the telecommunications market, as foreseen in Law 431/2002. Second, and as soon as the 2009 Budget Law is enacted, the Authority will present to the Council of Ministers the secondary legislation needed to provide a solid foundation for the organization and staffing of the Authority. Finally, we will continue to invest in training the Authority’s staff and to introduce effective and efficient policies and procedures.

Telecommunications can become Lebanon’s engine for economic growth and competitiveness and a viable and renewable source of economic prosperity. For that to happen, the Government of Lebanon and the Authority need to work closely together to open telecommunications to competition. Mobile telecommunications and broadband (both mobile and fixed) telecommunications are ripe for competition and must not be held back for any reason. The economic stakes are too high for Lebanon to experiment with the failed policies of protectionism, or to indefinitely link one step towards liberalization with another, albeit important, such as the establishment of Liban Telecom. Despite the worldwide economic crisis, Lebanon’s telecommunications market remains very attractive to Lebanese and foreign investors. This is an opportunity for all Lebanese to seize.



Kamal Shehadi
Chairman and CEO



ABOUT THE TRA

“Our mission: to establish a regulatory environment that enables a competitive telecommunications market and to deliver state-of-the-art services at affordable prices to the broadest spectrum of the Lebanese population.”



The Telecommunications Regulatory Authority (TRA) is an independent public institution assigned to liberalize, regulate and develop the emergent telecommunications market in Lebanon. The legal basis and mandate for the TRA were both clearly defined in the Telecommunications Law 431/2002, which went into effect with the appointment of the Authority's Board.

The establishment of the TRA was a significant milestone signaling the start of the liberalization and the development process of telecommunications that would encompass the entire Lebanese telecommunications sector. Through the introduction of appropriate regulations and decisions, we, at the TRA, promote investment, maintain market stability and ensure the protection of consumers' rights. We are solely responsible for issuing licenses, managing the radio spectrum and the overall Numbering Plan. At the same time, we oversee the market, guarding against any abuse of dominant market power and against anti-competitive practices by any relevant player. If such practices do occur, the TRA has the mandate to take all necessary measures to remedy them.

Most importantly, we are committed to reclaiming a leading role for Lebanon in ICT, by re-establishing the country on the international telecommunications scene

and re-instituting international standards. These are the challenges we eagerly chose to meet and that we will continue to make progress towards in 2009. In effect, we intend to establish the TRA so that it may serve as a model institution for other regulators in Lebanon and the region.

The TRA Chairman and Board Members were appointed in February 2007 (Council of Ministers Decree 1/2007) with the first Board meeting being held in April of that same year. During this initial meeting, the Board assigned functional responsibilities to all of its members and adopted its current Code of Practice and Mission Statement.

Our mission is to establish a regulatory environment that enables a competitive telecommunications market and to deliver state-of-the-art services at affordable prices to the broadest spectrum of the Lebanese population.

As we strive to adhere to our mission, we consistently reinforce our key values of **independence, transparency, accountability** and **fairness**. These values guide our decision making, and together with our commitment to creating a competitive telecommunications market, they are the ties that bind our institution.

OUR MANAGEMENT



Kamal Shehadi, PhD
Chairman and CEO

Prior to his appointment as Chairman and CEO of the TRA, Dr. Shehadi was the Managing Director of Connexus Consulting, a leading consultancy firm in the Middle East and North Africa specializing in telecom policy, regulation and strategy. Dr. Shehadi has served as a consultant to several international organizations and telecommunications companies since 1996, including the World Bank and the European Commission. He has advised governments, operators and regulatory authorities on telecommunications regulation and licensing in a number of countries including: Jordan, Saudi Arabia, Morocco, Algeria, Egypt, Bahrain, United Arab Emirates, Turkey, Libya, and Lebanon. Dr. Shehadi has also served as Board Member in a number of organizations, most recently: the Lebanese Transparency Association (LTA) and the Lebanese Businessmen's Association (RDCL).

Dr. Shehadi holds an undergraduate degree in Economics obtained with Honors from Harvard University (Massachusetts, 1986), and a PhD in International Political Economy from Columbia University (New York, 1995). Dr. Shehadi has lectured at the American University of Beirut, Harvard University and Columbia University. He has also published a number of influential works on privatization, public finance and foreign investment.

Our Board is composed of a full-time Chairman and three full-time Board Members. Their five-year term of office is both non-renewable and non-extendable. The Chairman and members of the Board cannot have any direct or indirect interest with any entity that provides telecommunications services or equipment.



Imad Y. Hoballah, PhD
Commissioner, Board Member, and Head of
Telecommunications Technologies Unit

Prior to his appointment at the TRA, Dr. Hoballah held the position of CEO at Omnix Media Networks. Dr. Hoballah has held different executive positions at Lucent Technologies and AT&T Bell Laboratories, gaining extensive and comprehensive experience in the field of telecommunications.

Dr. Hoballah's academic record is a noteworthy one. He holds a diploma in the Program for Executive Development from IMD Lausanne (Switzerland, 2000), a graduate degree in Project Management from George Washington University (Washington DC, 1997), an Executive Masters of Business Administration from Columbia University (New York, 1994), a Ph.D. in EE/Communications from Syracuse University (New York, 1986), an MS in Electrical Engineering from Syracuse University (New York, 1982), and an undergraduate degree in Chemistry from the Lebanese University (Lebanon 1979).

"We deal with technology in general, making sure that we assign spectrum efficiently and to the maximum benefit of the country. We also deal with all elements of new technologies, defining new services, which serve the public and consumers, and keeps us ahead of the curve in the economy. On the level of standards, ensuring that they are understood clearly, we work to protect issues related to the health, safety and security of the country as a whole."



Mahassen AJAM

Commissioner, Board Member, and Head of Information and Consumer Affairs Unit

Prior to her appointment at the TRA, Mrs. Ajam maintained an outstanding record in the field of Data and Internet services, where she was acting as the Executive Director for GDS and IDM, with broad experience in business development and international relations.

Mrs. Ajam recently served as a Board Member of the Professional Computer Association and, as such, has been actively involved in the telecommunications' sector policy and regulatory affairs. Mrs. Ajam holds an MBA from Ecole Supérieure des Affaires (Lebanon, 1997), a graduate degree in urban planning from Paris Sorbonne University (France, 1986), and an undergraduate degree in Engineering from the Lebanese University (Lebanon, 1983).

“Our Unit has multidisciplinary tasks: On the regulatory front, our unit works primarily on protecting consumers’ rights and handling their complaints in close coordination with other units and partners. In line with such a responsibility, the ICAU supervises the Public Consultations processes, to guarantee that the TRA’s decisions and regulations are transparent and taking into account the interests of all stakeholders. On the other hand, our Unit deals with internal and external communications affairs. I believe the image of the TRA is built from the inside-out. In this regard, the ICAU works on building an internal culture of openness based on shared objectives and teamwork. In parallel, the unit plays a critical role in external communication with the media and targets the public to ensure the TRA’s goals and principles are successfully communicated. All the while: they are building bridges with other global institutions so that the organization can benefit from international experience. All of this, together, is what makes the ICAU the beating heart of the Authority and fosters its continual spirit of transparency and openness.”



Patrick EID

Commissioner, Board Member, and Head of Market and Competition Unit

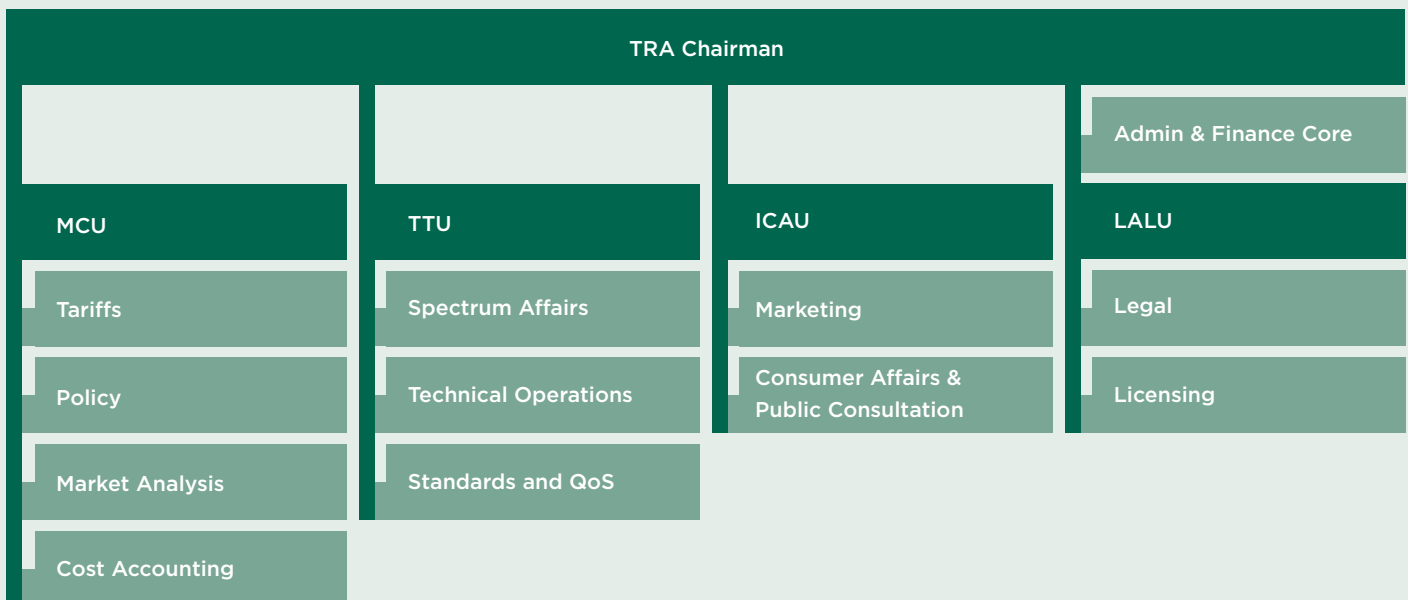
Prior to his appointment at the TRA, Mr. Eid was working as a Senior Technical Consultant for Segenius, a major consulting company for telecom operators in the MENA Region.

Mr. Eid has held the position of Chief Technical Officer (CTO) for the Lebanese mobile operator FTML- Cellis, a France Telecom affiliate, and was the General Manager of X25 Activity at IBM Lebanon, where he focused mainly on the banking and corporate sector. Mr. Eid holds an Engineering degree in Telematics from the Ecole Nationale des Ponts et Chaussées (France, 1989).

“The MCU’s mission within the TRA is to ensure fair and transparent competition in the telecommunications market. The MCU evaluates the impact of technologies on the telecommunications market and suggests policies for market development based on thorough economic market research and assessment. Another major role of the MCU is to suggest regulations and specifications for interconnection, numbering and spectrum, while ensuring that they are met by the licensed Service Providers. In addition MCU studies the tariffs of all Service Providers while it approves the tariffs of those providers with significant market power (SMP). Finally MCU suggests and oversees the implementation of the Universal Service policy and its specifications, proposes spectrum right to use fees and manages the analytical accounting check to ensure that service tariffs are cost-based.”

Our organization consists of four main units and an administrative and financial core which fall under the supervision of the TRA Chairman. Each distinct unit is headed and managed by a Board Member who is also responsible for maintaining coordination between them.

OUR ORGANIZATION



Market and Competition Unit (MCU)

The Market and Competition Unit (MCU) deals with all economic affairs related to the telecommunications market. The MCU regularly assesses the market through in-depth analyses in order to avoid any abuse of dominant positions while imposing remedies if necessary. The unit is responsible for monitoring anticompetitive behaviors and studying tariffs and fees to ensure fair and transparent competition is taking place.

By conducting economic, financial and market research, assessments and analyses, the MCU is able to study the potential of the telecommunications market and draw up corresponding guidelines for its development.

A large part of this unit's role is to focus on preparing the policies to be adopted by the Authority, so as to ensure the expansion of the sector in a healthy, monitored and compliant environment.

Telecommunications Technologies Unit (TTU)

The Telecommunications Technologies Unit (TTU) deals with all technological and procedural matters including the management and governing of frequency spectrum, standards, quality of service, and interconnection. This unit reviews the development and evolution of telecommunications technologies providing comprehensive statistics and trends in a timely manner.

“We promote transparency by publishing available studies, reports, memos, decisions, consultations, regulations and any other document deemed significant for distribution.”

Information and Consumer Affairs Unit (ICAU)

The Information and Consumer Affairs Unit's (ICAU's) mission is to increase public awareness and protect consumers interests. In line with the TRA's values, the ICAU promotes transparency by publishing available studies, reports, memos, decisions, consultations, regulations and any other document deemed significant for distribution. The unit also manages the external relations of the TRA and thus ensures efficient internal and external interaction. The ICAU is responsible for organizing forums and lectures, disseminating reports and literature, and managing the institutions' website and Intranet. According to its role, as the main link between consumers and the TRA, the ICAU prepares consumers statistics, questionnaires, reports and analyses, whilst dealing with consumer complaints between Service Providers and subscribers.

Legal Affairs and Licensing Unit (LALU)

The Legal Affairs and Licensing Unit (LALU) is responsible for monitoring and enforcing the license compliance of Service Providers, managing licensing procedures, issuing licenses and updating the legal framework of the telecommunications sector. These updates must remain in line with the framework's needs, especially when preparing legal studies and drafting laws and decrees. In addition, this unit establishes files and documents for disputes and complaints while also mediating, when necessary, disputes concerning the use of public properties that arise between telecommunications Service Providers and/or relevant administrations and/or municipalities.



SETTING THE CONTEXT

Liberalization is one of the main pillars for the development of the telecommunications sector in Lebanon. It is a key factor related to the growth of the National economy and the increase in overall competition. Thus, the sale of the two state-owned mobile networks was deemed necessary and the auctioning process was launched in November 2007. The objective was to liberalize and privatize the market. However, due to the global financial crisis, the auction process was discontinued.

The TRA has deployed efforts and resources to work on broadband liberalization in Lebanon. The TRA's vision of a liberalized broadband market, defined in its draft

“National Broadband Strategy” submitted to the Minister of Telecommunications in August 2008, focuses on the benefits of broadband deployment with respect to the National economy as a whole. The TRA drafted the National Broadband and Carrier Licenses (NBCLs) as well as the technical requirements for NBCLs and National Broadband Licenses (NBLs).

A spectrum re-farming and packaging plan was issued for consultation in October 2008. Re-farming is when spectrum in a specified band, for a certain technology, is re-allocated for a different technology or different Service Provider than the spectrum was originally



“The Telecommunications sector is a key factor related to the growth of the National economy and the increase in overall competition.”

licensed for. Current spectrum allocation does not comply with international standards; it limits competition, the introduction of new technologies and market development. Not only will this project align current spectrum allocations with ITU regulations, but it will revolutionize the nature of the competition and boost economic growth by optimizing spectrum usage.

The TRA's efforts in 2008 to liberalize the telecommunications sector were focused on defining the priorities for a market which had seen a long period of stagnation and, except for Internet services, practically no competition. In this regard, the TRA has worked on

numerous regulations to develop, organize and liberalize the telecommunications sector in Lebanon. The expected impact of this liberalization is an increase in the number of mobile and broadband subscribers, while improving customer choice and improving the quality of service as well as lowering prices.





**LIBERALIZING
THE MARKET**

“The TRA is legally mandated to liberalize the telecommunications market in Lebanon in a fair and transparent manner”



Overview

The TRA is legally mandated to liberalize the telecommunications market in Lebanon in a fair and transparent manner by issuing new licenses and establishing best-in-class regulations. In May 2008, the TRA instigated a consultation process with relevant parties on its Liberalization Roadmap. This time-table summarizes the TRA's current position and future plans for the liberalization of Lebanon's telecommunications

sector. The TRA's Liberalization Roadmap was based on thorough study of the Lebanese telecommunications market, and an understanding of other countries' liberalization as well as in depth consultations with current stakeholders and interested investors . Together, these provided the TRA with essential data on telecommunications services in general and the expected benefits of liberalization.

The TRA relies on two types of market studies. The first is a field survey designed to measure customer satisfaction levels and determine their needs, while the second set of studies is market assessment designed to evaluate the current market, its level of competition, and to pinpoint areas for further development.

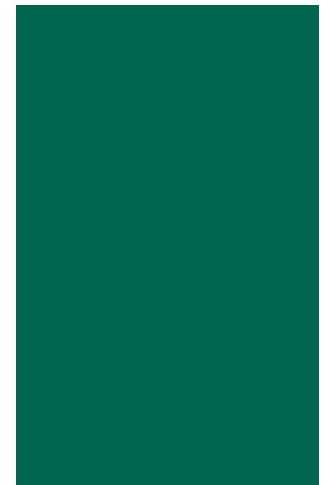
1.1 CUSTOMER SATISFACTION SURVEY

A customer satisfaction survey of the landline, mobile, Internet and data markets was conducted in 2008. Its objective was to shed light on major issues such as services penetrations, usage and non-usage habits, consumer satisfaction or dissatisfaction, as well as market needs and required improvements. The field surveys that analyzed market demand amongst residential and corporate consumers were conducted by a reputable consulting firm. This was followed by in-depth interviews with the main Service Providers in order to assess supply.

The results were submitted in October 2008 and presented to the public at a conference in December of that same year. These results made the assessment of

usage patterns and consumer satisfaction levels possible, along with the assessment of both short-term and long-term strategic and technical objectives of Service Providers. The findings enabled the TRA to conduct a thorough analysis of the market's strengths, weaknesses & opportunities that shaped the basis for its reform and liberalization plans.

	Strengths	Weaknesses	Opportunities
Fixed Voice	<ul style="list-style-type: none"> ■ Relatively good copper infrastructure ■ Regionally competitive price per minute 	<ul style="list-style-type: none"> ■ De jure MoT monopoly ■ No incentive to upgrade the infrastructure and introduce new technologies ■ Low penetration rate ■ Stagnant growth 	<ul style="list-style-type: none"> ■ Increased demand of fixed line resulting from ADSL take up ■ Important growth potential ■ Liberalization of the international gateway ■ New regulatory framework ■ Consumer behavior: early adopter
Mobile	<ul style="list-style-type: none"> ■ Pent-up demand for mobile services ■ High mobile revenues 	<ul style="list-style-type: none"> ■ High charges ■ Lag behind in terms of new technologies ■ Low market penetration ■ Limited choice in mobile packages ■ Shortage of adequate investments 	
Data	<ul style="list-style-type: none"> ■ Relatively competitive ■ Lucrative segment ■ New wireless technologies deployed ■ Pent-up demand for data and Internet services 	<ul style="list-style-type: none"> ■ Shortage in International bandwidth ■ Access hindered by incumbent operator ■ High international bandwidth prices, discriminatory allocation of bandwidth ■ Uncertainty over regulatory framework 	



1.2 MARKET ASSESSMENT

A market assessment is essential in defining the relevant markets, their level of competition and evolution, and in identifying the major milestones of a liberalization plan.

In 2008 a thorough telecommunications market assessment was carried out by the TRA (as part of a European Commission funded project) which focused on the period up to, and including, December 2007. The main objectives of this assessment were to:

- Review the current provisions, developments, and gaps in the Lebanese telecommunications services
- Analyze the effect of liberalization on tariffs and market penetration
- Review market and consumer satisfaction surveys
- Identify a telecommunications Liberalization Roadmap and the service liberalization priorities

In the first phase of the assessment, information was collected from all main Service Providers (SP) in the mobile, fixed and data markets. Detailed Requests for Information (RFI) were sent to Service Providers asking for current and historical, market and statistical data. This included information such as available service packages, number of subscribers, tariffs, usage and revenues.

In addition to providing a comprehensive portrait of the telecommunications services available in Lebanon, the market assessment included a comparative study of other countries displaying similar economic or market indicators.

Market indicators as of end 2008

	Penetration	Number of Service Providers	Private / State-Owned	Level of competition
Mobile Market	36%	2	State-Owned	Monopoly
Fixed Market*	68%	1	State-Owned	Monopoly
Internet Market**	38%	-16	Private	Competition
ADSL Market**	-9%	-8	Private through MoT Local Loop / Ogero	Limited competition

* Household penetration for residential subscribers
 ** Household penetration

The Lebanese telecommunications market specificities can be summarized with an overview of the mobile, fixed, broadband and international sectors.

2.1 MOBILE

In June 2004, the Ministry of Telecommunications entered into agreements with FalDete and MTC Lebanon to manage the two state-owned mobile networks MIC1 and MIC2 respectively. Both entities were responsible for the day-to-day management of the mobile businesses, which included operations, billing, marketing, maintenance and other activities. The managers received contractually fixed monthly amounts for operational expenditures, while collected revenues were transferred in full to the Ministry of Telecommunications (MoT) on a monthly basis. The terms of the agreement did not allow the Network Managers to make changes to end-user service prices unless specifically authorized by the government.

To improve this situation, an auction process for the two state-owned mobile networks was launched by the TRA and the Higher Council for Privatization (HCP) in November 2007, with the aim of privatizing the market. In the first quarter of 2008, the TRA and HCP continued to work on the auction process; site visits were conducted with potential bidders, an online virtual data room and mobile auction website were continuously updated, and questions raised by bidders were answered regularly. However, due to the global financial crisis, the auction process was discontinued by the Council of Ministers (CoM).

In November 2008, the management agreements with FalDete and MTC Lebanon expired. Negotiations to extend FalDete's contract failed, while MTC's agreement was extended for a further two months. As a result, the Council of Ministers authorized the MoT to manage MIC1 (Alfa) for two months and launch a closed tender for the management of both businesses.

During the transition period, the TRA worked with the Ministry of Telecommunications on the preparation of new management agreements. This particularly focused on Quality of Service (QoS) indicators and the TRA's role in monitoring the SIM and recharge cards distribution policy, while simultaneously defining steps to eradicate the black market in Lebanon.

As a result of the selection process, in January 2009 Orascom and Zain Telecommunications were appointed as the new Network Managers for MIC1 and MIC2 respectively, for a period of one year renewable for another. The management agreements with Orascom and Zain took effect on February 1st, 2009.

As of Q4 2008, MIC2 (MTC Touch) controlled approximately 58% of the total market subscribers while MIC1 (Alfa) controlled the remaining 42%. The overall level of mobile penetration in Lebanon at the time, including both MTC and Alfa subscribers, stood at around 36%. Although this represents a year-on-year increase of roughly 19%, the penetration rate remains well below that of regional countries with a similar GDP per capita to that of Lebanon.

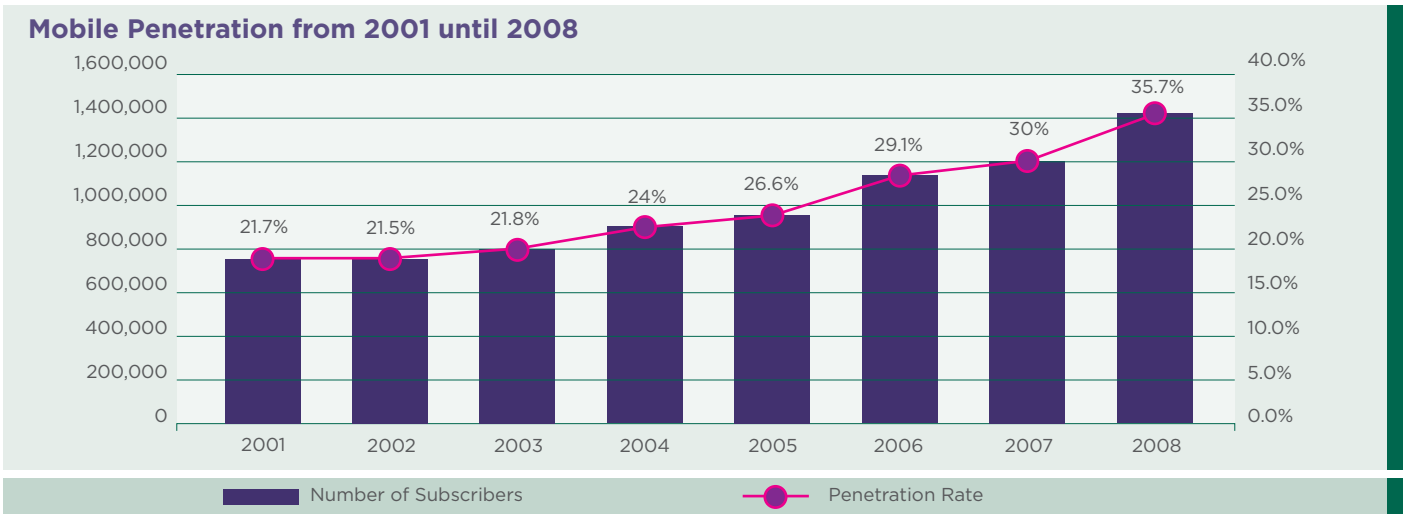
Moreover, throughout 2008, the TRA monitored mobile operations, and developed QoS indicators, consumer protection guidelines, and the distribution policy for mobile phone lines and prepaid cards. The TRA drafted the Code of Practice for Value Added Services and followed up the black market complaints.

2.2 FIXED

The fixed line household penetration rate for residential subscribers was approximately 68% at the end of 2008. This is in line with expectations based on GDP per capita when compared to other countries in the region¹. Demand in the fixed line market is expected to increase in 2009 as a result of the geographical expansion of Digital Subscriber Line (DSL) services in Q4 2008, and the anticipated expansion in Q1 2009, to reach a substantial 80% coverage of fixed line subscribers. The decrease in connection fees and per-minute rates on the local network will also contribute to fixed line penetration growth.

¹ Sample includes Algeria, Bahrain, Egypt, Iran, Iraq, Jordan, Lebanon, Lybia, Morocco, Oman, Syria, Tunisia and Turkey.

Mobile Penetration from 2001 until 2008



2.3 BROADBAND

DSL services were introduced in mid-2007 and reached a penetration rate of approximately 9% of households by December 2008. Due to the high level of pent-up demand, a significant increase in DSL penetration was registered throughout the year. During the last quarter of 2008, the Ministry of Telecommunications contributed to the expansion of the number of DSL-enabled central offices, increasing the total to 45 out of a possible 380.

That being said, Lebanon still lags behind regional countries in broadband adoption. The quality-price ratio is below the required level for true broadband-enabled communication. Due to the high rate of overbooking of subscribers and shortage of international bandwidth, residential users do not enjoy contracted broadband throughput at peak hours and business users still face unreasonably high prices.

The TRA’s market analysis, complaints received from the private sector, and interviews conducted during field surveys, all indicate that the DSL market is still underdeveloped in terms of bandwidth and offered services, and thus fails to meet the needs of both residential and business consumers.

The Ministry of Telecommunications will only release limited information, and as a result, it has been difficult to analyze the root causes of this slow development. However, it can be concluded that while some of the problems stem from anti-competitive behavior, others relate to the lack of appropriate investments.

The TRA believes that the growth and development of broadband services and the deployment of high speed networks requires not only the appropriate regulatory framework but also infrastructure - based competitors. In this regard, the TRA has developed a draft National

Broadband Strategy, which it submitted to the Minister of Telecommunications in August 2008.

2.4 INTERNATIONAL GATEWAY

By the end of 2008, available international bandwidth had increased from just 2 STM1 (one solely for voice and the other for both voice and data) to reach 8 fully protected STM1. The additional 6 STM1 are being allocated to both the MoT and the private sector; the ISPs will be served according to their requests. The STM1 notation refers to a bandwidth capacity of 155Mega bits per seconds (Mbps) or 63 E1s over the Transmission network. The MoT has reserved 49 E1s, each consisting of 31 Timeslots, to accommodate new requests for international call centers. Each Timeslot has the ability to carry one voice conversation, and therefore each E1 line has a capacity of 31 conversations. These E1s will be priced in accordance with those granted to ISPs through the International Private Leased Circuits decree number 16852, dated April 28, 2006.

The Cadmus cable linking Beirut to Cyprus has a total capacity of 10Gbps using 64 STM1 networks, which are partially activated. The Ministry of Telecommunications (MoT) is undertaking a study with a view to a further upgrade of the existing cable to the much more advanced and capable DWDM (Dense Wavelength Division Multiplexing) technology.

Additional expansion of international bandwidth is expected to continue in 2009. And there will be two additional STM1 links to be distributed among ISPs, the MoT and call centers. The possibility of future expansion is also being assessed by the Ministry.

The expected impact of telecommunications liberalization can be measured by the increase in the number of mobile and broadband subscribers while driving improved customer choice, improved quality of service and lowering prices. The TRA's vision of a liberalized broadband market outlined in its draft "National Broadband Strategy" submitted to the Minister of Telecommunications in August 2008, focuses on the benefit of broadband deployment on the National economy as a whole.

3.1 MOBILE

To forecast the impact of mobile market liberalization, the TRA worked with its consultants to develop two different models. One took into account investments, penetrations and revenues, while the other focused on the introduction of new tariff packages and their impact on subscriber growth. Three different scenarios were utilized, all of which analyzed penetration growth coupled with the decrease in tariffs and the evolution of revenues. Assumptions were made as to the date of privatization of MIC1 and MIC2 and the entry of Liban Telecom as the third Mobile operator. As a result of the current market situation, it was decided that a "delayed" scenario would be adopted. In this scenario, the TRA estimates privatization of the two current mobile operations to take place in 2010 and the entry of the third mobile licensee to occur the following year. Based on this model, mobile penetration is expected to reach at least 60% within four years of liberalization. This translates to approximately 2.66 million subscribers in the mobile market by 2014.

The entry of a third mobile operator will most definitely drive down end-user prices, with the TRA expecting the two mobile incumbents to decrease their prices in the initial introduction period. In the long term, prices are expected to decrease at a rate of 5% annually based on the increased competition and privatization. The fall in average prices for connection and airtime is expected to be counterbalanced by an increase in average usage by existing subscribers and by a rise in quantity of total subscribers.

Based on international studies⁽²⁾, the TRA expects an increase of 1.2% in GDP for each 10% increase in mobile penetration. Therefore, the liberalization of the mobile market could result in a cumulative GDP growth between 2009 and 2014 of 15.9%, compared to 8.14% over the same period (based on a conservative annual GDP growth of 2.5%) if liberalization fails to take place. As can be seen from these numbers, successful liberalization has

the potential to roughly double the GDP growth between 2009 and 2014.

3.2 BROADBAND

Broadband is a key driver of economic growth and development with numerous benefits for both businesses and society. The TRA has developed a comprehensive strategy to speed-up broadband deployment and widen access to broadband services.

3.2.1 Broadband benefits

The effective utilization of broadband has a significant impact on both public and private sectors productivity. Broadband deployment promotes and facilitates innovation by boosting companies' growth, productivity and efficiency. Medium size businesses with an Internet connection faster than 2Mbps have productivity ratios that are 4% higher than those with lower speeds⁽³⁾.

The TRA forecasts that the liberalization of the broadband market will increase the quantity of subscribers to 400,000 by 2019. In addition, it is expected to result in attractive bundled packages priced at roughly \$40-\$50/month for residents, and \$600/month for the corporate 'multi-play' package. Subscribers will be able to enjoy true high-speed Internet and data transfer, video and teleconferencing capabilities. Residential subscribers will be provided with speeds up to 10Mbps, while businesses subscribing to the corporate package will be able to experience speeds up to 1Gbps.

Analysis undertaken in 15 EU countries⁽⁴⁾ concluded that a 70% household broadband penetration rate would contribute to a 1% increase in the GDP, whereas a 90% penetration rate would contribute to a 1.6% increase. Taking into consideration the current exceptionally

² GSM Association, Global Mobile Tax Review, 2006-2007

³ Broadband Stakeholder Group (UK); New Zealand National Broadband Strategy, the Scottish Executive

low broadband penetration rate in Lebanon, the TRA forecasts that the anticipated swift uptake of broadband in Lebanon will have a much stronger impact than that experienced in developed, mature markets.

Other research comparing international benchmarks⁴ shows the positive impact of broadband deployment on local employment. Results found that for every 1% increase in broadband penetration rate, employment increases at a rate of 0.2% to 0.3% per year. Approximately 54,000 new jobs are expected to be created in the ten-year period up to 2017 from 2007, as a result of broadband deployment and the ensuing liberalization. Although more difficult to quantify, a positive impact on job creation in other related business sectors is also expected.

3.2.2 The National Broadband Strategy

The National Broadband Strategy prepared by the TRA envisions bringing larger, high-speed communication pathways that would grant Lebanese citizens faster and more reliable access to information, and revolutionize their way of living.

In January 2008, the TRA organized a broadband workshop in collaboration with the Partnership for Lebanon, which brought together the main stakeholders, to discuss the TRA's vision for market liberalization. The initial plan discussed during the workshop was based on a business and financial model developed by Cisco Systems, Inc, which argued that there was room for a second Service Provider deploying a National (core) fiber network as well as metro rings.

The National Broadband Strategy was then drafted and submitted to the Minister of Telecommunications in August 2008. The plan emphasized on the establishment of competitive broadband infrastructure by auctioning off two National Broadband and Carrier Licenses (NBCL), in addition to the license to be granted to Liban Telecom. This strategy works to liberalize the broadband market and ensure an open access market within the physical limits of available spectrum resources. The licensed companies would work to upgrade system performance in the Core, Metro and Access networks.

Opening the broadband access market (according to the physical availability of spectrum) forms a significant part of the TRA's reform and liberalization plan. As an initial step in line with Telecommunications Law, on

April 4, 2008 existing Data Service Providers (DSPs) and Internet Service Providers (ISPs) were granted interim licenses. These expired on December 31, 2008 and were subsequently extended until December 2009.

In 2008, extensive work was undertaken to prepare for the liberalization of the broadband market. With the assistance of its consultants, the TRA drew up the National Broadband and Carrier Licenses draft as well as the technical requirements for the NBCLs and National Broadband Licenses (NBL). The minimum rollout coverage and obligations were defined, based on a model developed for this purpose, and taking into consideration a number of different scenarios related to issues such as the expected penetration levels and number of relevant players. Final details will continue to be defined, in line with the scope of the licenses, and may include additional requirements to those resulting from the aforementioned model.

The TRA has also begun drafting the model and rules for the auction process, taking into account the advantages and disadvantages of a single round bid system versus multiple ascending rounds bids. The timing and prerequisites for each type of license to be auctioned were also taken into consideration.

The success of broadband liberalization will depend largely on the issuance of decrees related to Rights of Way, Spectrum Right to Use fees, and the sharing of the MoT's ducts. The TRA has completed drafting these decrees to be submitted to the Minister of Telecommunications in Q2 2009. The TRA has also worked on infrastructure sharing regulations that will authorize the allocation of facilities for Service Providers with significant market power.

A Spectrum Re-farming and Packaging Plan was issued for consultation in October 2008. Current spectrum allocation is not in line with international standards and limits the introduction of new technologies and subsequent market development. In addition, it does not fully reflect the potential value of this scarce resource.

The purpose of this plan is to:

- Accommodate increased competition and future growth
- Optimize the returns from spectrum usage for Lebanon
- Optimize actual spectrum usage
- Re-align the current assignment with the ITU allocation and technology advancements.

⁴ Broadband Stakeholder Group (UK); New Zealand National Broadband Strategy, the Scottish Executive

⁵ OECD, Broadband and the Economy, June 2008

For 2009, we expect to achieve a number of key objectives in market liberalization building on the solid foundations we established in 2008. These have come to include:



LOOKING FORWARD

- 1** Granting licenses to new Internet Service Providers and Data Service Providers to stimulate and increase healthy competition.
- 2** Issuing the Broadband Licensing Plan, outlined in the draft National Broadband Strategy submitted to the Minister of Telecommunications in August 2008, and grant National Broadband and Carrier Licenses through an international auction.
- 3** Finalizing the licensing process of Liban Telecom (currently known as the MoT/Ogero and being the National Fixed Line Operator) upon its corporatization.
- 4** Studying and overseeing the implementation of the distribution policies suggested by the two new mobile operators, and recommending amendments guaranteeing consumers' rights protection.
- 5** Studying and overseeing the implementation of mobile operators Key Performance Indicators (KPI) as suggested by the Office of Owner Supervisory Board (OSB), while simultaneously assessing Mobile Operators performance and their compliance with the agreed KPIs and international standards. These must comply with the Quality of Service (QoS) and KPIs regulation issued by the TRA.
- 6** Issuing periodic reports on Mobile Network Managers performance and measurements of current QoS indicators and comparison to the agreed KPIs as well as outline any necessary change or improvement to meet the set KPIs.
- 7** Continuing to build TRA's infrastructure and capacity in order to efficiently achieve its mission.





**ESTABLISHING
THE REGULATORY
FRAMEWORK**

“In its role as a regulatory body, the TRA faces several challenges.”



Overview

In its role as a regulatory body, the TRA faces several challenges, one of which is to determine the priorities for a market, which had long been deprived of the policies required to boost its development and safeguard fair competition. Other challenges lie in implementing a transparent process for issuing regulations and policy decisions based on public consultations and taking into account the best interests of all stakeholders in the market as well as international benchmarks in the telecommunications markets.

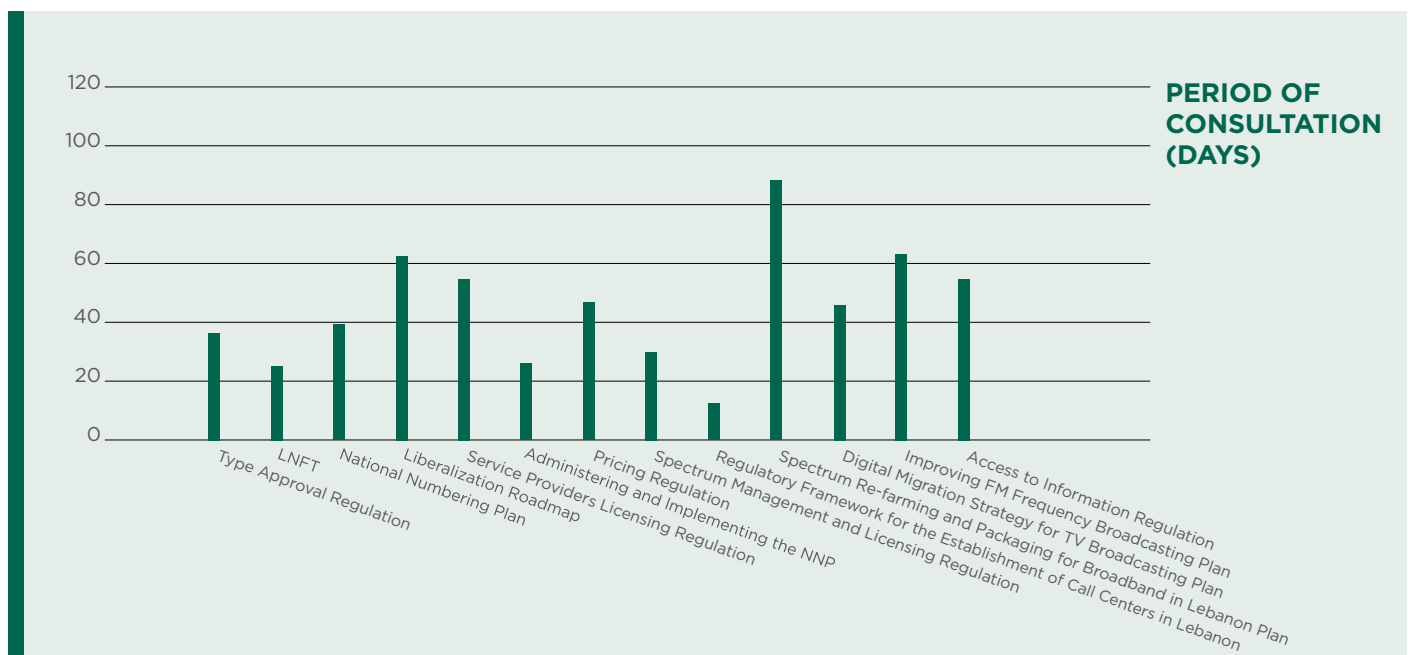
In this regard, the TRA has worked on regulatory guidelines across a number of sectors. While most of this work has taken place simultaneously, priorities have been taken into consideration and duly implemented.

In 2008, the TRA accomplished its target of issuing critical regulatory documents for public consultation to the relevant stakeholders. Most of the latter played an active role in the creation of a finalized version of the regulations through their opinions and general feedback.

At the same time, the TRA carried out the necessary studies to ensure regulations were based on sound, legal foundations. These studies included for example rights of way and infrastructure sharing, as well as the necessary modifications to new building requirements to accommodate modern telecommunications or the Spectrum Right to Use fees for licensed providers. Further studies were also commissioned as a result of feedback from telecommunications stakeholders.

1 ISSUING PUBLIC CONSULTATIONS

To date, public consultation documents issued by the TRA have received a generous amount of feedback. Appraised by the TRA, these relevant findings have been published in the finalized versions of the documents, as an integral step toward market liberalization.



Here below is a chronological list of documents released for public consultation:

- Type Approval Regulation
- Lebanese National Frequency Allocation Table
- National Numbering Plan
- Liberalization Roadmap
- Service Providers Licensing Regulation
- Administering and Implementing the National Numbering Plan
- Pricing Regulation
- Spectrum Management and Licensing Regulation
- The Regulatory Framework for the Establishment of Call Centers in Lebanon
- The Spectrum Re-farming and Packaging for Broadband in Lebanon Plan
- Digital Migration Strategy for TV Broadcasting Plan
- Improving FM Frequency Broadcasting Plan
- Access to Information Regulation

In drafting these regulations, the TRA employed the best international benchmarks, while taking into consideration the Lebanese constitution, general legislation and binding rules and regulations.

1.1 TYPE APPROVAL REGULATION

Among its duties stated in the Telecommunications Law (articles 22 and 23), the TRA is tasked with ensuring that telecommunications equipment imported into or manufactured in Lebanon meets a minimum set of regulatory, technical and safety requirements. They must also be compliant with international Electromagnetic Compatibility (EMC) standards. These standards provide that equipment should not damage or interfere with the correct working of a public telecommunications network, or cause harm to the public or staff working on those networks.

In this regard, type approval certification is required before telecommunications equipment can be imported in Lebanon. The Authority has drafted type approval certification based on international standards and best practices to act as a reference point. This document was released for public consultation in February 2008.

1.2 LEBANESE NATIONAL FREQUENCY ALLOCATION TABLE (LNFT)

Spectrum is considered a National scarce resource and as such, the TRA seeks to manage it in line with international developments, while simultaneously stimulating technological innovation and competitiveness. The TRA's effective management of radio spectrum takes into consideration the market, government and the private sector needs.

To achieve this goal, the TRA issued the first Lebanese National Frequency Allocation Table (LNFT). This table divides Lebanon's radiofrequency spectrum into a number of frequency bands in line with ITU regulations, specifying general purposes for which the bands might be used. This process is referred to as the allocation of frequency bands to radio-communication services.

The LNFT is an essential and clearly defined document. Its publication is a major milestone in the efficient use

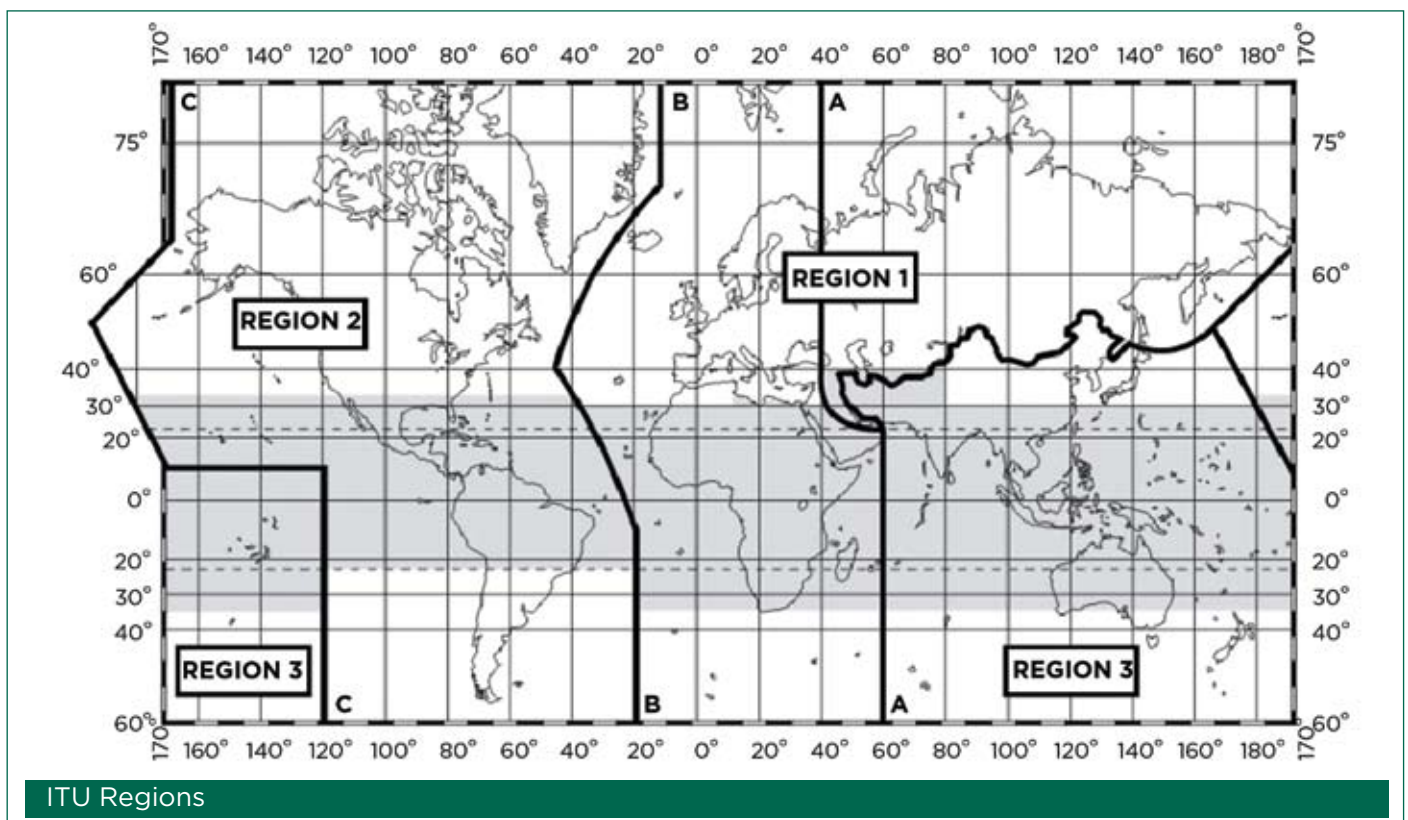
of spectrum, and will contribute to a range of benefits, including interference reduction. The LNFT will be periodically updated in line with international proposals and National decisions.

1.3 NATIONAL NUMBERING PLAN (NNP)

Under the Telecommunications Law (articles 5.1.f and 31.1), the TRA is responsible for establishing and managing the numbering needs of public telecommunications service users. The TRA adopted a staged consultation process on numbering. The first stage involves dealing with proposed changes to the Numbering Plan, while the second deals with the Implementation of Numbering changes and Administration.

Numbering management is principally concerned with telephone numbers and dialing codes. The TRA's review of the Numbering Plan is a direct result of the previous plan's lack to provide adequate availability of numbers for distribution amongst Service Providers.

The proposed plan is termed a 'Closed' Numbering Plan, and, in contrast to the current system, removes the need for local dialing codes. A 'closed' Numbering Plan gives all numbers (except international numbers and short codes) the same length, thus reducing potential customer confusion and simplifying the introduction of number portability.



1.4 LIBERALIZATION ROADMAP

As part of its legal mandate to liberalize the market and enable competition, the TRA has set several objectives:

- Broadband development and dissemination
- Mobile sector liberalization - the launch of the mobile auction to privatize the two state-owned mobile network assets followed by the issuance of two 20-year mobile licenses for the provision of mobile services

- Corporatization, licensing and privatization of the National fixed line operator Liban Telecom.

The TRA has issued a Liberalization Roadmap summarizing its position and plans with respect to sector reform, opening the market to licensing, and achieving the full liberalization of telecommunications services in Lebanon.

		2009	2010	2011	2012	2013	2014
Mobile ⁽¹⁾	Network Operator	3 ⁽²⁾			■		
	Virtual Network MNVOs				■		
PTSN/ Basic Telephony	Network Operator	1			?		
	Reseller				?		
Broadband	Access	●					
	National (core, metro and access)	3 ⁽³⁾					
International Access	Voice & Data Facilities Based Provider	3 ⁽⁴⁾					
	Data Only Facilities Based Provider	2 ⁽⁵⁾					
	Voice and Data Resellers						
<p>● Open Licensing ■ Market Review ▲ License Award</p>		<p>(1) The privatization of the mobile sector will depend on the regional and international financial markets conditions (2) Two mobile operators and Liban Telecom (3) Two National Broadband and Carrier Licenses and Liban Telecom (4) Two mobile operators and Liban Telecom (5) Two National Broadband and Carrier Licenses, subject to CoM's decision</p>					

Note: The above Liberalization Roadmap was updated in line with the development of the market and presented by the TRA in the Diaspora event held in December 2008.

1.5 SERVICE PROVIDERS LICENSING REGULATION

The TRA is legally mandated to set a clear regulatory framework for telecommunications Service Providers and to optimize the market structure through fair and transparent regulations, aligned with international best practices.

The Service Providers Licensing Regulation clarifies the Authority's actions with regard to licensing Service Providers and the treatment of those licenses. It details the type and classification of licenses to be granted by the TRA, reviews the conditions under which each license is delivered, and details the issuing process.

1.6 ADMINISTERING AND IMPLEMENTING THE NATIONAL NUMBERING PLAN

In March 2008, the TRA issued a new National Numbering Plan (NNP) for consultation. This has recently been followed by a second consultation dealing with "Administering and Implementing the National Numbering Plan". This consultation sets out new arrangements for

numbering administration; detailed proposals for the future of short codes, premium-rate, and shared-cost service numbering, and further suggestions for changes to the Numbering Plan.

1.7 PRICING REGULATION

The TRA works on ensuring fair levels of healthy competition while eliminating anti-competitive behavior. It does so, by providing remedies to the tariffs offered by Service Providers, with Significant Market Power (SMP), in relevant markets. The TRA's recommended approach imposes some obligations on Service Providers related to tariff filing and publication, such as: to notify the TRA of the tariffs for offered services, and the manner by which they publish such tariffs.

The TRA aims to outline potential methods of ex ante regulation for designated services such as cost based pricing, price approval requirements and implementation of price controls. This regulation takes a proactive approach by establishing rules and procedures prior to their implementation.

1.8 SPECTRUM MANAGEMENT AND LICENSING REGULATION

The TRA launched its “Spectrum Management and Licensing Regulation” document for consultation in July 2008. This regulation is designed to provide current and potential sector stakeholders with clear and concise explanations of the TRA’s actions, relating to the management and licensing of Radio Frequency Spectrum. The regulation is a binding document that states the official policies and procedures of the Authority.

The TRA aims to establish a fair, effective, transparent and speedy procedure for the licensing of Radio Frequencies to Service Providers. This will also include the allocation of radio frequencies for various governmental uses and other related purposes.

1.9 THE REGULATORY FRAMEWORK FOR THE ESTABLISHMENT OF CALL CENTERS IN LEBANON

In September 2008, and in response to a request from the Minister of Telecommunications seeking clarification on the matter, the TRA issued a draft decision on “The Regulatory Framework for the Establishment of Call Centers in Lebanon” for public consultation. In October 2008, it issued the amended decision after taking into consideration major issues related to call center implementation.

The TRA has concluded that call centers do not represent a provision of telecommunications services as described in the Telecommunications Law, but constitute a Value Added Service, and therefore do not require a license from the TRA.

1.10 THE SPECTRUM RE-FARMING AND PACKAGING FOR BROADBAND IN LEBANON PLAN

The TRA issued the “Spectrum Re-farming and Packaging for Broadband in Lebanon” plan for consultation at the end of October 2008. This plan is designed to provide potential and current stakeholders in the sector with explanations of the TRA’s actions, related to the re-farming and packaging of spectrum for broadband wireless services.

Once issued in its final form, the plan will represent a binding document, stating the TRA’s position and approach regarding the implementation of re-farming and packaging of spectrum for broadband wireless services.

In constructing the plan, the TRA considered international best practices for the allocation, packaging, licensing and usage of Radio Frequency Spectrum. It was also based on the Lebanese constitution, general principles of law and other applicable laws and regulations.

1.11 THE DIGITAL MIGRATION STRATEGY FOR TV BROADCASTING PLAN

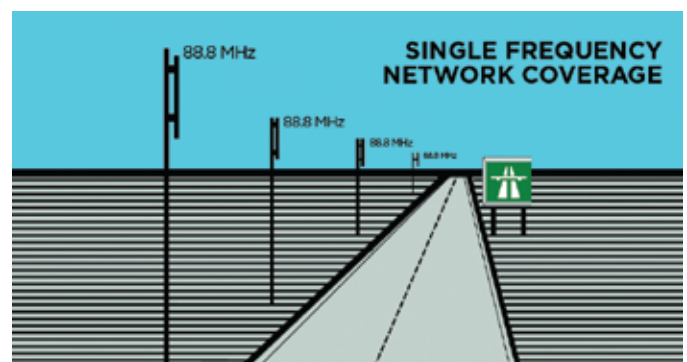
The TRA has issued the ‘Digital Migration Strategy for TV Broadcasting’ plan for consultation. In doing so, the TRA has expressed its desire to seek opinions regarding its plan to migrate from analog to digital TV broadcasting, based on the Geneva 2006 Agreement. This agreement coordinates the allocation of frequencies for Digital TV broadcasting in Europe, the Middle East and Africa, in order to prevent harmful cross-border interference.

At the ITU World Radio Conference in 2007, the ITU reviewed UHF spectrum and set the timeline for transition to digital TV for various countries. In Lebanon’s case, the ITU has set a target date of 2015 for the cessation of analog broadcasting.

Digital TV technology allows more efficient use of the frequency spectrum, transmission of a larger variety of programs, and the introduction of new services such as “High Definition Television”, which delivers a sharper, more clearly defined picture to viewers.

1.12 IMPROVING FM FREQUENCY BROADCASTING PLAN

The “Improving FM Frequency Broadcasting” plan aims at improving the quality of FM Broadcasting by enhancing coverage and reducing interference. In addition, the TRA is seeking suggestions from stakeholders regarding the allocation and improvement of FM Broadcasting in the 87.5-107.9 MHz band. Feedback will be used to advise the government on the appropriate policies to be adopted.



1.13 ACCESS TO INFORMATION REGULATION

The TRA has issued the “Access to Information” draft for consultation. In doing so, it aims to encourage interaction between the Authority and the public, so as to ensure that all stakeholders in the telecommunications sector are involved in the decision-making process. Based on the TRA’s commitment to transparency, this draft regulation explains how different parties can access the information and studies that underpin the TRA’s decisions. The draft also emphasizes the fact that all parties have equal access rights, without any preferential treatment.

Part of the TRA's work involves conducting detailed legal studies of issues that directly affect the execution of its plans. These include subjects such as rights of way, which plays a major role in the success of the liberalization of broadband and its implementation, in line with previously defined objectives; new building requirements that comply with the need to provide modern telecommunications services to consumers also fall under this category.

Prior to drafting any related decrees, the TRA examines all aspects in collaboration with its local and international legal consultants, and undertakes discussions with relevant parties and organizations, such as ministries, syndicates and Service Providers. If necessary, the TRA organizes workshop discussions, in order to reach a comprehensive solution that fits current and applicable rules and regulations. Minor changes to certain clauses are inevitable at times, yet all of these actions are carried out with the sole aim of liberalizing the telecom sector in a fair and speedy manner.

2.1 RIGHTS OF WAY

In line with the Telecommunications Law and its objective of launching broadband services in Lebanon, the TRA has worked to ease access to public property for licensed Service Providers. It has done so through the preparation of a decree, which defines the conditions for public property use, the procedures that apply to licensing applications, and the basis for the allocation of related charges, compensation and fees.

Articles 35 and 36 of the Telecommunications Law set out the provision of rights of way to licensed Service Providers and the use of public and private properties (including the rights of way to existing public sector infrastructure). The law allows Service Providers to excavate certain areas, erect towers and lay the ducts required to carry their telecommunications networks. It also allows Service Providers to re-enter these sites to carry out any necessary repairs and maintenance work.

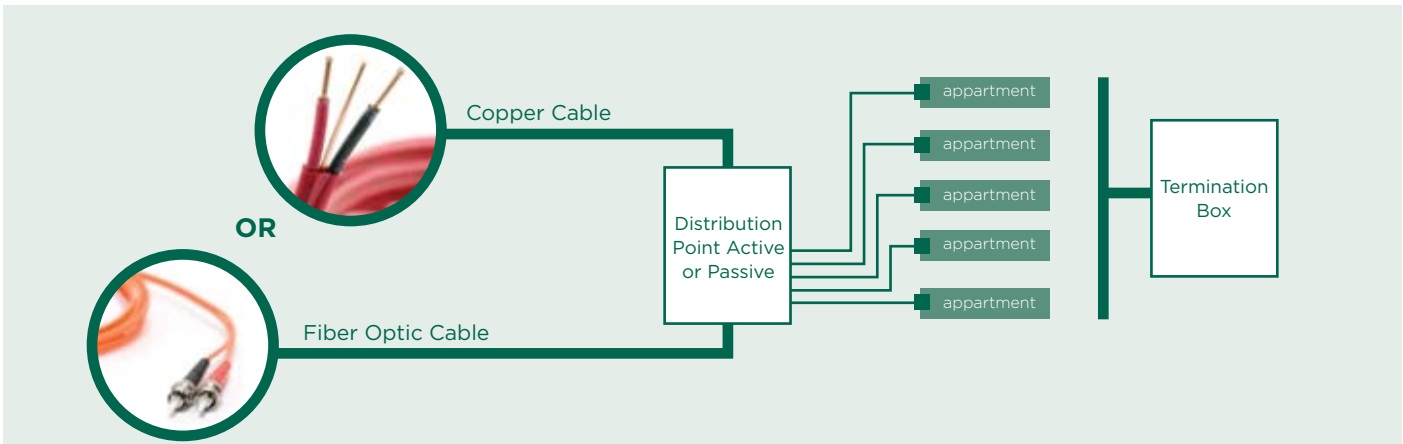
The provision for enabling Service Providers to build and operate networks on existing public properties is designed to reduce the need for civil works and their associated costs. Lebanon boasts an extensive public property portfolio, which if made available in accordance with article 35, would greatly reduce the costs to telecommunications Service Providers of building and operating a modern telecommunications network.

Any procedural framework should be based on international best practices tailored to the Lebanese market. With this in mind, the TRA has studied the subject from all perspectives - legal, technical, procedural, and

financial - in collaboration with its local and international consultants. The TRA's aim is to secure easy access to existing infrastructure at a low cost. This is considered one of the most crucial elements for the successful modernization and expansion of broadband services. This is made especially noticeable when taking into account that the cost of new infrastructure can sometimes reach up to 80% of the overall network cost.

Based on these studies, the TRA is currently formulating a draft decree concerning rights of way access and use of public property. In addition to setting out the legal procedural framework, the decree will provide the basis for the calculation of charges and fees that licensed Service Providers should pay to access and use the relevant infrastructure. The decree will also provide a clear definition of the TRA's mediatory role in disputes resolution.

The draft will be handed to the Minister of Telecommunications in Q2 2009 to be submitted to the Council of Ministers (CoM) for approval. The CoM's approval will act as a constructive initiative, helping to forge a public-private sector relationship, and encourage investment in telecommunications infrastructure. This will have a positive impact on the modernization of broadband services across Lebanon.



Wiring new buildings for broadband connectivity

2.2 NEW BUILDING REQUIREMENTS TO SUPPORT BROADBAND SERVICES

The TRA has drafted a document that outlines new building design requirements to secure the delivery of broadband services to residential and commercial tenants. These requirements will apply to all newly constructed buildings, and are designed to support both the current and future broadband needs of subscribers. The intention of this document is not to alter or modify the existing Public Switched Telephone Network (PSTN) guidelines for basic voice services, but rather to provide other codes and requirements that should be applied to building specifications. These include the main components that should be taken into consideration such as the entrance facility, equipment room, cable pathways, telecommunications cabinets, transmission media and other miscellaneous services.

The TRA will submit a draft decree for new building requirements, after the public consultation process, and in coordination with the relevant government departments (such as the Directorate of Urban Planning) and syndicates (such as the Syndicate of Engineers and Contractors). The draft decree will be submitted for approval to the Council of Ministers, via the Directorate of Urban Planning.

2.3 OPERATIONAL FOLLOW-UP

The TRA receives a variety of requests from stakeholders within the telecommunications sector and performs daily follow-up procedures in response to them. Those related to licensing requests for telecommunications services or wireless frequencies are responded to in accordance with the existing legal framework.

The TRA also responds to complaints from licensed Service Providers regarding interference that impairs quality of service, as well as complaints relating to the difficulties faced updating the TRA customer database in specific markets, such as DSL.

In addition, the TRA conducts regular follow-ups on requests logged at the Ministry of Telecommunications dating from the time of the transition of power from the MoT to the TRA. The TRA’s objective is to secure a final decision on these requests and limit the impact of the transition period on all relevant parties.

Mail and email requests related to licensing, the regulations for new licenses, type approval and other investment-related subjects are responded to daily by the TRA’s Legal Affairs and Licensing Unit (LALU) in cooperation with all other TRA units.



In addition to creating the necessary regulatory framework to liberalize the market, the TRA simultaneously undertakes efforts to resolve spectrum-related affairs on a range of issues. The latter include the regulations related to short and long frequency spectrum management, and the permanent follow-up of difficulties related to the efficient short-term management of spectrum.

As a basis for the organization of its regulatory and follow-up procedures, the TRA has collected data from all spectrum users such as public institutions, NGOs, radio and TV stations, mobile Service Providers, Data Service Providers and others. This information provided the foundation for a spectrum usage database, which continues to be updated on a regular basis.

At the request of the Minister of Telecommunications, the TRA provided in December 2008 a license for the use of 1800 MHz frequencies by MIC1 and MIC2 that are currently managed by Orascom Telecom and Zain in order to expand the GSM networks, and improve overall capacity/coverage.

The TRA has also implemented a number of measures to address interference complaints. These include fieldwork activities to stop interference at its source and the issuance of pertinent circulars (numbers 1/2008 and 2/2008). These two circulars request the cessation of jammers and repeaters usage, and the halt of importation, sale, installation and use of such equipment. In addition, the TRA has consulted with the MoT on interference that takes place in border areas and locations under UNIFIL control. As a result, the TRA and MoT have combined efforts to bring an end to interference in these areas.

With a view to issuing the Spectrum Re-farming and Packaging Plan, the TRA has carried out studies related to spectrum usage in the current market, and its potential development. The results have been discussed with the relevant ministries, in particular the Ministry of Telecommunications and the Ministry of Information, in order to provide them with a complete picture of the state of play, drawbacks and potential solutions related to FM and TV broadcasting and data transmission. The ultimate aim is to redistribute these resources, and provide the best conditions for their development, in accordance with international benchmarks. To date, the TRA has implemented the necessary procedures to ensure the transparent and fair management of these resources.

3.1 DATA COLLECTION

Considerable effort has been made to collect spectrum usage data. This involved sending a detailed request for information to all known or listed spectrum users, which was followed up with meetings held at the TRA to clarify the need and importance of accurate data collection.

The TRA requested and collected detailed technical data from: TV and sound broadcasting users, Wireless Access for data services, GSM mobile, Public Safety Professional Mobile Radio (PMR) and government security, fixed Point-To-Point links, MoT/Ogero fixed links, and other private civilian and amateur users.



This data is used for the validation of assignments, coordination with neighboring countries, and the registration of frequencies for ITU protection. It also plays a significant role in deciding on possible reassignments and the gauging of efforts required to evacuate segments of occupied bands.

3.2 SPECTRUM MANAGEMENT

Spectrum Management entails the foundation of rules and regulations for:

- Licensing
- Pricing
- Systems and equipment
- The broadcast sector
- Re-farming

3.2.1 Spectrum licensing

Prior to issuing spectrum licenses, the TRA focused on:

- Spectrum Management and Licensing Regulation
- National Frequency Allocation Plan, spectrum band and channel planning
- Spectrum pricing

Before spectrum or frequencies could be allocated to governmental, or private bodies, the TRA found it necessary to fully inform telecommunications stakeholders of their licensing options. Thus, the TRA produced:

- A review of the licensing conditions with a table presentation of the different types of individual and class licenses
- Spectrum Management and Licensing Regulation
- Opinion documents entitled: Spectrum Right to Use (RTU) and Spectrum Administrative Charges (SAC) that were prepared and issued for consultation and will serve for the preparation of the Spectrum RTU and SAC Draft Decree to be proposed to the Minister of Telecommunications and CoM approval

In addition to the general regulatory aspects, the TRA worked on the following:

- The channeling plans for the Professional Mobile Radio (PMR) were assessed as per their compliance with the latest ITU recommendations. Accordingly, application forms and licenses for Radio Amateur, PMR and VSAT-CUG were drafted. Aeronautical, mobile on aircraft, Maritime and VSAT licenses were also put into writing. VSAT stands for: Very Small Aperture Terminal
- The Interim Frequencies License for the current DSPs (P2P and PMP frequencies) were issued. The DSPs' comments on the Interim Licenses were incorporated into the final drafts
- Additional mobile frequency licenses were issued to MIC1 and MIC2 for the 1800 MHz bands with the aim of expanding the GSM networks and their capacity/coverage

3.2.2 Spectrum pricing

In accordance with the Telecommunications Law, spectrum fees are divided into two categories: Right to Use (RTU) fees and Spectrum Administrative Charges (SAC). The TRA developed a cost-based approach to determine spectrum charges for each kind of service. Relevant administrative fees were incorporated into the costs. Both the RTU and SAC fees were compared to prices in other countries.

The TRA administered and reviewed Lebanon's Spectrum Management Policy and specified policy recommendations for each band.

3.2.3 Spectrum systems and equipment

In 2008, the TRA prepared the Request for Proposal (RFP) for a complete Spectrum Management and Monitoring System (SMMS) that was submitted to the USAID office in Beirut to ensure necessary related funds.

A grant was received from the ITU for the Spectrum Management System for Developing Countries Software, SMS4DC. This multi-functional computer program was offered with three licenses, allowing three people to use it at the same time. An SMS4DC, two-week, training workshop was jointly organized by the ITU and the TRA; 12 TRA staff members attended.

The TRA finalized three purchase orders for: an Anritsu Spectrum Analyzer, a Rhode and Schwarz Active Directional Antenna, and the AG Aronia Log Periodic Antenna.

With regards to technology, the TRA received authorization approval from the Office of the Minister of State for Administrative Reform (OMSAR) to use aerial maps. The TRA is coordinating with the Directorate of Geographic Affairs (DAG) and the Ministry of National Defense in their efforts to obtain the maps in digital format from the MoT.

3.2.4 Broadcast sector

In 2008, the TRA completed a number of initiatives in the broadcast sector and suggested a feasible Migration Plan, from analog to digital, compatible with the Geneva 2006 agreement. The TRA also evaluated the wireless and cable distribution status in Lebanon and made recommendations accordingly.

A study was carried out on new applications for Microwave Video Distribution Systems (DBC, Goldstar, VIP and United Cable Lebanon) and the TRA assessed the Advanced Topographic Development and Images (ATDI) plan. Once the study completed, the team prepared a suitable RF plan for FM broadcasting in Lebanon. The TRA

sent an RFI to the FM and TV Broadcasters, Microwave Video Distribution Systems (MVDS) operators and SNGs; a consultation process was conducted before the final report.

3.2.5 Re-farming

Current spectrum allocations, especially in the 2.5 GHz and 3.5 GHz bands, are not aligned with the ITU allocations and recommendations. They do not reflect the real value of this scarce resource.

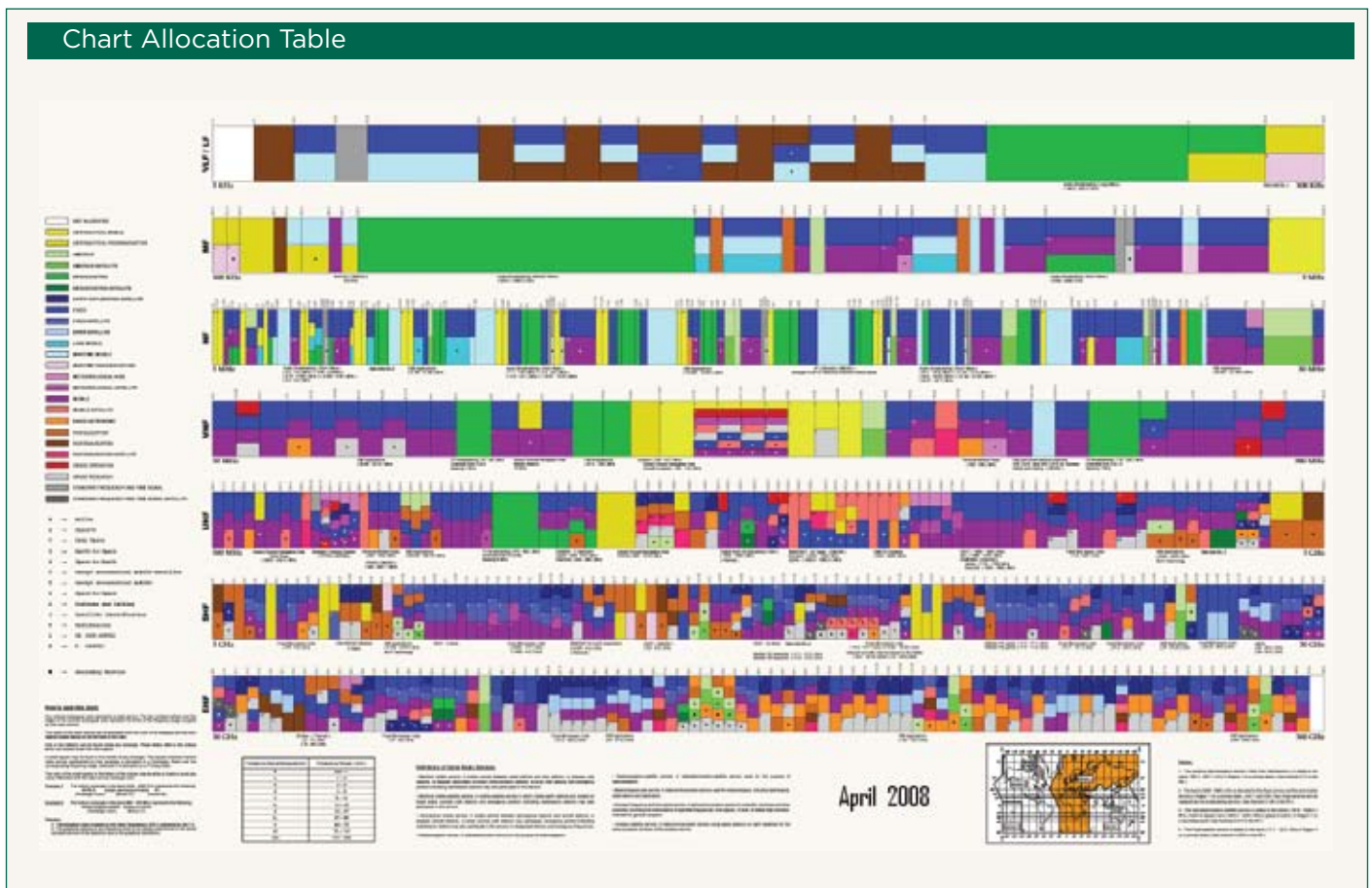
In 2008, the TRA assessed the current use of valuable bands (1.9, 2.5, 3.5, 5 and 26 GHz) and made initial recommendations. The reallocation of the 2.5 GHz and 3.5 GHz bands was deemed essential and, thus, became the primary focus of the plan.

The TRA carried out extensive industry consultations on the proposed Spectrum Re-farming and Packaging Plan and received wide-ranging feedback. Revision of the 'Re-farming Proposal' is to incorporate industry feedback, market needs and suggested solutions.

The next step is to hold technical meetings with relevant stakeholders to:

- Discuss the TRA's post-consultation proposal
- Identify the spectrum that will be allocated to existing DSPs
- Identify the spectrum blocks that will be reserved for NBCL and NBL licenses and awarded at an auction, as well as those that should be reserved for future use
- Approximate the impact of re-farming, e.g. cost
- Determine the plan's migration process and schedule

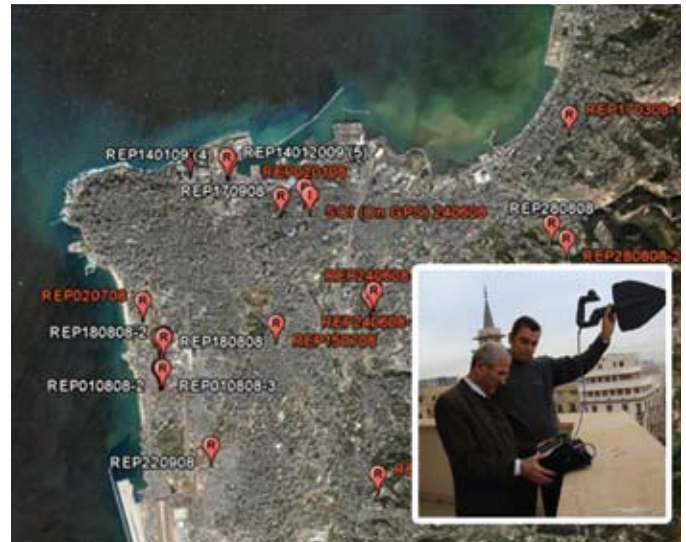
Chart Allocation Table



3.3 FIELD WORK

An observation team from the TRA carried out fieldwork to determine the origins of interference on mobile (GSM) and wireless data networks. A committee composed of members from the TRA and MoT was subsequently created. Their aim was to strengthen the network signal and to eliminate interference issues stemming from jammers and other such devices.

The team frequently visited sites where interference was widely present. In the final quarter of 2008 alone, the TRA and MoT teams were able to identify and confiscate more than 46 illegal, unlicensed, devices in Beirut and its suburbs. The team also worked to solve interference problems in other regions; they discovered more than 60 GSM repeaters in just a short period of time. Once these illegal devices were confiscated, the quality of service in these regions improved significantly.



4 PROTECTING CONSUMERS

Protecting the rights of consumers forms one of the most crucial responsibilities of the TRA, as outlined in the Telecommunications Law. Although the TRA has faced challenges in this domain, it continues to uphold consumer protection as a priority.

4.1 CONSUMER AFFAIRS REGULATION AND COMPLAINTS PROCEDURE

The Consumer Affairs Regulation was sent for public consultation at the end of 2007 and the TRA is currently working on its prompt publication. To date, publication delays are due, in most part, to the lengthy process of incorporating the wide-ranging feedback received during the consultation period. A consumer complaints procedure is also being developed and integrated into the consumer affairs guidelines.

The TRA sought the cooperation of consumer affairs organizations; upon reaching an agreement, the TRA and the Consumer Protection Directorate of the Ministry of Economy and Trade (MoET) collaborated to create the consumer complaints procedure. As a result of this, a Memorandum of Understanding (MoU) is to be signed with the Ministry of Economy and Trade. Based on this document, the necessary tools, programs and hotline can be put in place as part of the consumer protection framework.

At the same time, the TRA has dedicated efforts to raise awareness among both Service Providers and the public, about the importance of consumer protection. This requires, for example, that Value Added Service Providers respect confidentiality of information; the Service Providers already started cooperating, even before the official publication of the regulations. All new Service Providers are aware of the necessity to comply with consumer protection regulations and procedures. Other efforts focused on ITU recommendations, suggesting the censorship of child pornography on the Internet and connecting persons with disabilities to the digital world. The TRA has printed an awareness booklet explaining its mission based on Telecommunications Law. The booklet also outlines its prime objectives and strategies for telecommunications market liberalization and its commitment to ensuring equal opportunities, safeguarding fair competition and protecting consumer rights.

4.2 RESOLVING COMPLAINTS STEMMING FROM ANTI-COMPETITIVE BEHAVIOR

The TRA receives a range of complaints from consumers and Service Providers directed at specific markets. Some complaints relate to Service Providers breaking their terms of services and causing interference problems, while others mainly relate to ADSL and prepaid mobile services.

4.2.1 Complaints related to spectrum

Spectrum management governs the effective use of frequencies allocated for specific uses. The TRA has delineated the necessary coordination efforts to ensure a long-term interference-free situation and defined the necessary procedures for workflow, in line with best international practices. Among the TRA's initiatives, was the development of a 'complaints form' currently available on the TRA website.

Interference complaints of from licensed Service Providers, broadcasting companies and consumers that stem from the misuse of equipment are followed up in detail by the TRA. Action is taken with relevant parties at the Ministry of National Defense, UNIFIL, the Customs, and the Civil Aviation Directorate. The TRA simultaneously cooperates with the MoT to counter such violations in all regions.

Field work measured the level of interference in the South of Lebanon, Tripoli, Jbeil, Amchit, and Dbayeh. Violations were found to be more concentrated in the Beirut area, including suburbs such as Jnah, Bir Hassan, Baabda and Sin el Fil.

4.2.2 Complaints related to ADSL

Since the launch of ADSL, the TRA has rigorously followed up on the development of its respective market and has received numerous complaints from private companies and consumers. The TRA has organized meetings with relevant parties to discuss both the obstacles to the development of these services and the achievements to date. Successes include: private sector participation in providing services, the expansion of network coverage, and the launch of a secure space on the TRA website designed for easy login of data.

The anti-competitive state of affairs amongst Service Providers necessitated the TRA's action plan, and a comprehensive situation analysis was subsequently conducted. This analysis provides a clear picture of the market and pinpoints the necessary actions relevant administrations must carry out.

The TRA's recommendations, which include measures to solve critical issues, have been sent to the Ministry of Telecommunications. Proposed solutions include among others: the severance of the MoT and Ogero tie (i.e. the separation of the wholesale service offered to DSPs and the retail services sold to end users), as well as the expansion of international capacity (necessarily, to be allocated fairly, and transparently, to private ISPs). The recommendations also incorporate a study of the current structure and prices of wholesale services; no clear framework had been delineated in a single decree, as of yet.

As the TRA awaits the response of the Minister of Telecommunications, to its recommendations, progress continues. The Authority is exploring the difficulties licensed Service Providers are facing. This knowledge will assist in the development of a market that can meet public demand and keep telecommunications consumers satisfied.

4.2.3 Complaints related to the mobile market

As a result of a weak distribution policy and the lack of capacity and coverage in mobile networks, demand has far outstripped supply in the mobile market. This has led to the existence of a prospering black market in Lebanon whereby consumers are forced to pay higher prices for needed services. The TRA determined the root causes of such illegal trade and sent recommendations to the Ministry of Telecommunications based on this analysis..

Dedicated to best practices, the TRA is cooperating with the Consumer Protection Directorate (CPD) at the Ministry of Economy and Trade to track distributors failing to comply with existing distribution and pricing policies. Awareness campaigns and continuous monitoring will commence once a Memorandum of Understanding is signed by the TRA and the CPD.



“Based on the 2008 findings, 2009 will be the year where theory is really put into practice; the implementation of important directives and regulations will take place at this time.”

LOOKING FORWARD

Based on the 2008 findings, 2009 will be the year where theory is really put into practice; the implementation of important directives and regulations will take place at this time. After two years of extensive research, debate, and planning, the binding documents will be finally released.

This will occur after final consultation with the Council of State. Upon the conclusion of the public consultation process, analysis of the feedback, consideration of all the available facts and data, the TRA-issued regulations will be published on its official website. They will also be published in the Official Gazette as valid binding regulations for all providers working in the Lebanese telecommunications market.

The following initiatives will be implemented:

- 1 The National Numbering Plan:** The new National Numbering Plan will take effect further to the TRA's issuance of the final document, realizing efforts to meet urgent market needs, especially in the mobile sector and for Value Added Services.
- 2 Transitional period of the Type Approval Process:** Upon issuing the Type Approval Regulation, the TRA is to advocate the issuance of related circulars by the Council of Ministers. The transition period is to last until December 31, 2009. During this time, all previously issued certifications will be cancelled; new ones will be re-issued by the TRA after a thorough study of the newly received applications, carried out in accordance with the Type Approval Regulation.
- 3 Protection of consumers:** Compliant with the Memorandum of Understanding with the Ministry of Economy and Trade, the issuance of the Consumer Affairs Regulation will be accompanied by an awareness campaign. Issues related to consumer rights and protection in the Lebanese telecommunications market, as well as the procedures to deal with consumer complaints, will be publicized.
- 4 Decree on the use of public properties:** After issuing the related guidelines, launching awareness campaigns, and training workshops, and involving related public institutions in the public consultation process, the TRA intends to work on issuing a decree; it will define the conditions for public property use. A decree comprised of procedures that apply to licensing applications and the framework for the allocation of related charges, compensation and fees, will be handed over to the MoT for approval and issuance by the CoM.
- 5 Decree on new building requirements that support broadband services:** The TRA is working on a decree for new building requirements requiring support of broadband services. The decree will be submitted for approval by the Council of Ministers, by way of the Directorate of Urban Planning.
- 6 Issuing the decree on Spectrum Right to Use (RTU) fees and Administrative Charges (SAC):** The TRA is working on issuing a decree related to RTU fees and SAC charges for the licensed Service Providers that will be handed over to the MoT for approval and issuance by the CoM.



**BUILDING
BRIDGES AND
CAPACITIES**

“TRA focuses on internal and external capacity building through the development of Human Resources and constructive dialogue with regional and international organizations”



Overview

To implement its telecommunications market liberalization plan, in line with best practices, the TRA must focus on internal and external capacity building. This is accomplished through the development of Human Resources and constructive dialogue with regional and international organizations as well as various telecommunications stakeholders.

In 2008, the TRA worked on capacity building and strengthening its administrative and financial independence, through the development of Human Resources. This involved finalizing the staffing structure and contractual employment procedures, implementing an organizational structure for resources and workflow, and carrying out ongoing staff training. The efforts proved successful considering the challenges of limited skilled telecommunications manpower and prevalent time restraints.

Significant investments in the creation of internal coordination procedures and a Management Information System (MIS) were also made.

1.1 DEVELOPMENT OF HUMAN RESOURCES

Effective Human Resources development requires a clear vision and a strategic plan with prudent foresight. Thus, a staffing plan was drawn, and the TRA mapped out the Human Resources strategy, in detail, incorporating: budget allocation, the adoption of contractual employment procedures, the formation of task forces within the various TRA units, and plans for continuous staff training to be completed in Lebanon and abroad.

1.1.1 Staff structure, contracting and employment

The number of hired staff and consultants increased from 29 to 40 in 2008, but the TRA, with the continuous increase of its responsibilities in Lebanon, remains in need of a larger specialized labor force. To initially address this matter, the TRA has recruited trainees and apprentices. This not only plays a vital role in easing the workflow, but also contributes to training a new generation with forward-thinking management approaches, whereby each member plays his/her own unique role.

When the need arises, the TRA also hires local and international experts on a contractual basis, e.g. legal

advisors on communication and administrative issues, and technical consultants on areas such as spectrum.

A structural comparative study of regulatory bodies in countries with legal structures similar to that of Lebanon's was carried out. The organizational chart outlined a 5-year-plan based on best practices, marking out the number of employees needed along with their necessary qualifications and experience. It was determined that a minimum of 90 qualified staff members would be required to swiftly carry out the tasks stipulated in the Telecommunications Law.

In late 2007, the TRA plan was submitted to the Council of Ministers for approval. It was later returned to the TRA for review. This project will be re-submitted once the TRA has achieved full administrative independence.

1.1.2 Organization chart

The TRA takes extensive measures to maximize organizational efficiency despite Human Resource limitations (please refer to the diagram on page 60 for a reflection of the chart flow for TRA employees).





1.1.3 Resource and function management

Given the scarcity of specialized Human Resources available to the TRA, a horizontal management approach was adopted. Task forces from various units took ownership of specific regulatory matters. Not only does this enable the TRA to meet the needs of the market despite their limited resources, but the approach also fosters employee specialization in different telecommunications disciplines. This contributes directly to staff capability development.

The TRA encourages the exchange of information between units through periodic meetings and reports. These sessions are open to all staff members regardless of their field of specialization.

1.1.4 Training

The TRA regularly evaluates the staff's training needs, and allocates the necessary financial resources to ensure all employees are familiar with the latest organizational, technological, legal and administrative developments.

The TRA maintains a steadfast commitment to maintaining a high level of staff professionalism. In 2008, alone, the TRA staff participated in the following capacity development initiatives through:

- United States Telecommunications Training Institute (USTTI) training sessions for members of the Telecommunications Technologies Unit, Information and Consumer Affairs Unit, and the Market and Competition Unit

- Conferences and workshops organized by the ITU
- Exchange of expertise with other Telecommunications Regulatory Authorities
- Euro-Mediterranean Regulators Network (EMERG)
- Arab Institute for Training & Research in Statistics
- Arab Spectrum Management
- Ofcom Switzerland

LEBANON

- International consultants also visited the TRA under the tutelage of a European Community grant. TRA members and consultants shared their experiences on macroeconomic and telecommunications data collection, comprehensive telecommunications market analysis, and the processes of drafting a liberalization strategy and a licensing roadmap.
- ITU Experts and engineers visited TRA and trained the authority team on the spectrum management and monitoring techniques and applications.
- In 2008, TRA staff participated in a number of communication training courses where they studied business correspondences and how to convey a professional image; Board Members were trained for their interactions with the media.

1.2 DEVELOPING THE TRA FINANCIAL RESOURCES

The Telecommunications Law 431/2002 states that the TRA should be financed by direct donations from the National Treasury during its first and second years following its foundation. Further to the second year of operations,



the TRA should secure its financial independence through the direct collection of regulatory fees from licensed Service Providers of telecommunications services.

The TRA has therefore prepared a draft budget for 2008 taking into consideration its ambitious objectives and plans for the telecommunications sector. This document has been approved by the Minister of Finance and Minister of Telecommunications.

However, and due to the fact that the State budget for 2008 has not been approved by the Parliament, the TRA opted for the advance on its budget to fulfill its mission and duties and requested the approval the Council of Ministers on 4.5 billion Lebanese pounds through Decision 76 dated Feb 7, 2008.

Despite limited available financial resources, the TRA was able to fulfill its mission on the regulatory front and pursued in parallel its efforts in building the institution in order to set the necessary regulatory framework for the sector. Furthermore, the TRA, worked on securing additional resources from international institutions, which contributed to the reduction of its expenses by providing funds to finance technical and consultancy assistance in completing its work.

On the other hand, the TRA prepared the regulatory and administrative drafts that, once approved and implemented, would lead to the financial independence as stated in the Telecommunications Law. The TRA therefore included in the draft budget for 2009, submitted to the Ministers of Finance and Telecommunications, the expected revenues deriving from direct collection from Service Providers in the telecommunications market and the consequent legal and administrative actions to be taken in coordination with concerned parties.

The 2009 budget represents a key milestone in building the capacity to develop the TRA resources and represents the starting point of its financial independence. Several meetings were held with concerned parties in the Ministries of Telecommunications and Finance where the most important clauses of the draft budget for 2009 were explained and discussed in their legal, administrative and technical aspects. The draft budget for 2009 was approved by the Minister of Finance on 27/12/2008 (letter reference 2811/1ص) and the Minister of Telecommunications on 21/01/2009 (letter reference 3692/اؤ), which will allow a gradual shift towards the financial independence of the TRA.

1.3 BUILDING THE NETWORK AND THE MANAGEMENT INFORMATION SYSTEM

The TRA ensured access to all hardware and software,

allowing for secure information sharing among engineers and managers. The TRA's management information system was built in several stages throughout 2008.

A virtual internal network was installed, where Intrusion Detection Systems were put in place to protect the information network and databases. Moreover, archiving and retrieval systems were developed. Additionally, a plan was drawn up for document sharing, auditing and accounting programs as well as other such requirements.

It is also important to recognize the efforts that went into designing and developing a secure, user-friendly survey program. Through this program, DSPs and ISPs are able to provide the TRA with regularly updated statistics. This pilot project initially focused on ADSL Service Providers, but is expected to be developed to allow communication and information sharing among all players in all telecommunications markets.

A database including organizational studies, technical and legal opinions, public relations, and requests for information and complaints was created. This database is updated regularly and is easily accessible by the Board Members and their teams.

The TRA team proved their resolve with the commendable teamwork displayed during the May 2008 conflicts. During this period, the staff ensured business continued uninterrupted by using secure, remote access to a network computer at the TRA headquarters.

1.4. DEVELOPING INTERNAL PROCEDURES

As a new institution, the TRA worked on developing internal operational procedures to ensure seamless coordination within the organization. In this regard, procedures were formulated and international consultants were contracted to provide the services in line with best practices.

In preparation for this, the TRA worked on creating and developing procedures that would maximize efficiency. These include set courses of action to coordinate and monitor the implementation of Board decisions, initiate public consultation processes, and ensure the publication or translation of official documents.

Additionally, the TRA conducted a situation analysis of the existing internal procedures and information management. Based on their evaluation, budget requirements for the development of procedures, training and maintenance were defined. The TRA will launch tenders and implement the first stages of this project in 2009, in line with its strategic objectives.

The TRA uses several platforms to interact with the public such as consultations, media relations and the raising of awareness, its website and events. The underlying objective is to ensure transparency so as to guarantee the rights of all concerned parties; this is done by raising awareness about issues that should concern the public and private sectors and by encouraging the participation of sector stakeholders.

2.1 COMMUNICATING THROUGH PUBLIC CONSULTATIONS

The public consultation process is an important tool in communicating with stakeholders in the telecommunications field, such as officials in the public sector, Service Providers, Consumer Rights Protection representatives and mainly local, regional and foreign investors interested in the Lebanese telecommunications market.

The TRA put great efforts in creating awareness and encouraging the public to express their views and providing feedback to its public consultations documents. Further to stakeholders request, the Authority granted numerous extensions to the deadlines to respond, in order to allow the opportunity for the widest audience to participate actively in clarifying the content of the public consultations documents.

The launching of public consultations covering important regulatory topics, intended to become binding decisions, is a very important and necessary step in the decision-making process of the TRA. This process provides everyone with the opportunity to express their opinions, rejections or acceptance of the first draft put out for public consultation by the Board, while maintaining the confidentiality of their comments should it affect their private business, or agreeing to having them published as non-confidential for other stakeholders to view.

On the other hand, the public consultation process provides the TRA with an opportunity to overlook all conflicting views and interests of the market, while ensuring that all available information is up to date in the light of the responses received, making the final version of the concerned binding decisions transparent and to the highest National interest.

From this perspective, the public consultation process, which involved over 13 documents in 2008, is one of the most important tools available in communicating

transparently with the stakeholders of the telecommunications market.

2.2 MEDIA RELATIONS AND AWARENESS EFFORTS

The TRA's media relations strategy was designed with the help of local and international consultants. Several internal and external communications initiatives have already been implemented.

External communication is achieved through the TRA's official website, considered to be the organization's public gateway. The TRA decided the website, alone, was not enough to raise awareness; hence, a periodic electronic newsletter was initiated, media relations were developed, conferences were organized, and electronic and printed publications detailing major TRA projects were disseminated.

2.2.1 Media relations strategy

In order to design an informed media relations strategy, the TRA conducted a survey of their local and foreign target audience. Representative sampling was used; the sample was comprised of 50 persons including consumers, Service Providers, government personnel and the media. The TRA relied on the survey results to formulate comprehensive strategic media objectives. This generated a number of initiatives, both internally and externally. Internal initiatives involved the set up of an Intranet network, conducting training, and establishing brand guidelines.

Efforts were made to develop media relations where the TRA strategically involved business and telecommunications reporters in a number of gatherings and high profile meetings where Board Members were able to interact with the media.

2.2.2 Intranet

In June 2008, the TRA launched the first version of its Intranet with the support of its ICAU team. The Intranet enables TRA staff to access up-to-date information including major telecommunications studies and reports as well as the latest TRA documents. Information relating to workshops, training and the day-to-day business of the TRA can also be shared by the staff. A dedicated Board Members section allows secure access to restricted information.

One of the outstanding features of the Intranet is a technical database of the latest and most important regulations issued by international organizations and regulators. The technical library is searchable according to subject, date, country and the source of the information.

2.2.3 Launch of a periodic electronic newsletter

The first issue of the TRA newsletter was launched in Arabic in Q4 2008. It tackled interference issues and concisely reported on TRA news and information. A bilingual, English and Arabic, edition is to be published in 2009.

2.2.4 Brand identity and guidelines

In 2008, the TRA worked on modernizing its logo and brand guidelines. This involved revamping the logo and other brand elements and their incorporation into electronic and printed material. The “brand guidelines” project was initiated to install the framework for a consistent internal and external brand image.

2.3 DEVELOPING AND UPDATING THE TRA WEBSITE

Service Providers, investors, and consumers consider the TRA website to be their official gateway to the organization. With transparency in mind, the website is

updated on a daily basis so that the information is timely and accurate.

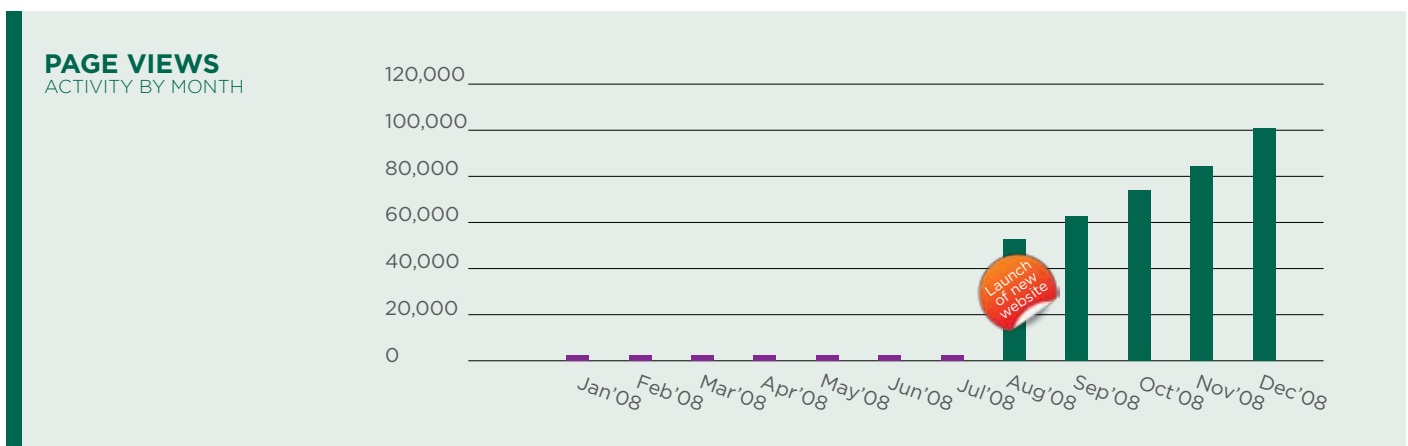
The website, initially launched in 2007, was developed in a very short period of time despite the lack of resources and budget. In 2008, the ICAU assigned a team to work on the launch of a more advanced version in English and Arabic that would deliver interesting and relevant content to the TRA’s various audiences.

There is a section on the website tailored to consumers where they can find information relevant to their needs, such as current offers and tariffs from telecommunications Service Providers. Another is customized specifically for investors and outlines current and future investment opportunities in the telecommunications sector. Licensed Service Providers have access to an online application that allows for the secure exchange of information; by logging in, they have immediate access to all documents submitted for public consultation as well as regulations, decisions and issued circulars. Underpinning the efforts to make the website as consumer-friendly as possible is the TRA’s commitment to providing fair and equal access to information.

The website plays a crucial role in raising awareness since it provides the public with access to articles and studies issued by the TRA, e.g. mobile privatization and broadband benefits. It also provides researchers with the necessary tools to access telecommunications information easily in the language of their choice.

These tools include:

- Secure access to confidential documents if a member has a login username and password
- A large-scale instantly searchable database
- A telecommunications glossary in both English and Arabic



2.4 EVENT ORGANIZATION AND AWARENESS CAMPAIGNS

In line with the TRA's strategy of dialogue and public awareness, the staff planned events and participated in major conferences and workshops in 2008. These included:

- **Broadband Stakeholders' workshop:** The TRA and Partnership for Lebanon organized a workshop titled "Broadband Stakeholders Workshop" on January 17, 2008. Under its auspices, a large number of experts from ISPs and DSPs, along with key officials in the telecommunications industry, debated challenges to the installation of high-speed broadband in Lebanon.
- **TRA 2007 Achievements Event:** A large conference was held on August 27, 2008 to announce the Authority's achievements in 2007. In a grand gesture, TRA Chairman Dr. Kamal Shehadi handed the Annual Report to the Minister of Telecommunications, Eng. Gibran Bassil and called for decision-making and action to develop the telecommunications sector in Lebanon.

The event took place in BIEL's Pavillon Royal in the presence of former Minister of telecommunications Marwan Hamade, Minister of Interior and Municipalities Ziad Baroud, Members of the Parliament, director generals, government representatives, telecommunications Service Providers and the media.

The Minister of Telecommunications assured the TRA of his full support and respect for the Authority's independence. He mentioned that the Ministry and the TRA shares similar visions for Lebanon. The MoT, in line with the TRA's stated aims, expressed its desire for the development of the telecommunications sector in Lebanon and extended its support to the provision of resources.

- **Transparency and Accountability Project-Closing event:** A conference was held on December 3, 2008

to celebrate more TRA achievements. These included the design and development of the new website, the publishing of an awareness brochure, and the issuance of the situation analysis of the Lebanese telecommunications market.

- **Telecom for Lebanon 08, Tapping the Diaspora:** this event co-organized by the MoT, TRA, Professional Computer Association (PCA), Berytech and the Partnership for Lebanon, called upon industry executives from the Lebanese Diaspora to share knowledge and offer insight into the advancement of Lebanon, their homeland.

Proposed initiatives included the establishment of links between local private-public institutions, as well as their counterparts in the Diaspora. It was recommended that there be assistance in the creation of strategic telecommunications projects; this would stimulate economic growth in the public and private sectors.

The event took place on December 29, 2008 at the Metropolitan Palace Hotel, Beirut. A plenary session where speakers presented discussion topics was followed by five round table discussions.

The events and conferences organized by the TRA in 2008 were major international and regional events that provided an opportunity to inform the public of the TRA's role in society, its mission, and on-going projects. The Lebanese telecommunications sector was simultaneously promoted through these initiatives.

In addition, the TRA's awareness campaign featured a booklet summarizing major strategic projects, an awareness brochure and a summary of Board Members' academic and professional backgrounds.



The TRA is working towards signing a number of Memorandums of Understanding (MoUs) with the public sector. They are designed to ensure the full implementation of the Telecommunications Law. These MoUs will accelerate the restructuring, organization and recovery of the telecommunications sector.

MoUs are expected to be signed with the Ministry of Telecommunications, Ministry of National Defense, Ministry of Economy and Trade and Directorate General of Customs. The initiatives will provide a framework for coordination; the requirements of the Telecommunications Law will be met without infringing upon the respective authority of each party.

3.1 MEMORANDUM OF UNDERSTANDING: MINISTRY OF TELECOMMUNICATIONS

The Ministry of Telecommunications (MoT) and the TRA share the aim of fully implementing the Telecommunications Law. Both parties are in the process of signing an MoU regarding the transition period; it will ensure that all regulatory powers are transferred, in a highly coordinated and organized manner, from the MoT to the TRA. The MoU aims to preserve the respective rights of the authorities and protect the telecommunications sector during this transition phase.

The MoU demarcates the powers and duties, of the two telecommunications authorities, pertaining to: satellite broadcasting services, private radio stations, telecommunications equipments import licenses, type approval, and the issuing of decrees. It also outlines the schedule for the transfer of Ministry databases and public property to the TRA, the infrastructure sharing policy, and the inspection and control procedures.

The memorandum will define the transition timeframe and the duties and obligations of both the TRA and the MoT. It will also address the control and inspection procedure stipulated in Part VII of the Telecommunications Law, the formation of a liaison committee to meet and coordinate all requirements for the transfer of powers and duties to the TRA, the nature of these duties, and the exchange of information.

The MoU also addresses the handling of pending files at the MoT, the submission of draft decrees and regulations to the relevant authorities, as well as the resolution of disputes that might arise from the interpretation and implementation of these guidelines.

3.2 MEMORANDUM OF UNDERSTANDING: DIRECTORATE GENERAL OF CUSTOMS

The TRA and General Directorate of Customs are working on a Memorandum of Understanding. It will refer to the customs transactions on imported equipments. This is in line with the Telecommunications Law that establishes the principle of liberalizing the access to telecommunications equipments by removing the unnecessary economic restrictions on importation.

According to the Telecommunications Law, standards and technical conditions applicable to imported equipment are to be determined by the TRA. The MoU outlines the conditions dictated by the Telecommunications Law and the regulatory decrees, e.g. the TRA's Type Approval regime which "requires that all equipments importers should obtain an import license and equipments approval certificate, renewable periodically".

The MoU clearly states that customs restrictions will only be lifted when the importer presents a TRA import license; Type Approval regulations will also be applied.

The MoU also addresses the TRA's rights in this respect; the TRA has the right to enter border facilities and conduct inspections at its own discretion or at the request of the Directorate General of Customs. In addition, the TRA has the right to all information related to importers and imported equipments. They can request such information from the manufacturer as well.

The MoU clarifies the exclusive privileges of the General Directorate of Customs to decide upon equipments prices and appropriate customs duties. The procedure to transfer telecommunications related issues from the Industrial Research Institute to the TRA is also outlined, in detail.

3.3 MEMORANDUM OF UNDERSTANDING: MINISTRY OF ECONOMY AND TRADE

Consumer protection is one of the TRA's main duties, and this includes the development of rules and regulations to ensure and clarify the conditions of this protection. In this respect, the TRA has established the "Consumer Complaints System" (CCS) which incorporates a mechanism for following up on and resolving customer complaints. The TRA's duties also include resolving disputes between telecommunications Service Providers and their customers or users, and the imposition of penalties for legal, regulatory or license violations.

The Ministry of Economy and Trade is also involved in responding to such consumer complaints under the Consumer Protection Directorate, as stipulated in the Consumer Protection Law No. 659/2005.

The TRA is working with the Consumer Protection Directorate to establish a Memorandum of Understanding that will guide the two authorities in their collaboration to ensure consumer rights protection. Together they will launch campaigns to raise awareness, respond to inquiries, and resolve complaints. All the while, they will be sharing knowledge and expertise in order to limit

public spending; efficiency will be maximized through the joint provision of these services.

The MoU outlines the basis for cooperation and coordination between both parties with regards to consumer complaints, the decision-making process, and the acquisition of necessary resources to perform this work. Complaints related to the telecommunications sector will be referred to the TRA; depending on the nature of the complaint, either the Consumer Protection Directorate, or the TRA, will handle the case.

The MoU details the work mechanism for the collection and settlement of complaints/disputes. The TRA, ultimately responsible for telecommunications-related disputes, expects a daily report of all such complaints from the Directorate who will respond in a timely matter, in order of receipt. The Directorate will maintain contact with the customer from the date of receipt until notification of a result.

Consumer protection is one of the TRA's main priorities. Thus, the TRA established the "Consumer Complaints





System” (CCS); along with the Consumer Affairs Regulations came the establishment of a mechanism for resolving customer complaints.

It is the TRA's duty to resolve disputes between telecommunications Service Providers and customers or users complaints as well as take actions to remedy any regulatory or license violation.

3.4 COORDINATION: NATIONAL INFORMATION COUNCIL

The TRA sent a report to the Ministry of Information and the National Council for Audio-visual Media outlining the current status of the broadcast sector in Lebanon. It primarily focused on interference and international coordination problems as well as the negative impact of broadcasting and TV transmission on public health.

3.5 THE COUNCIL OF STATE

The TRA has developed a number of draft regulations and presented them to the public for consultation. The Authority performs its duties under the framework established by the Telecommunications Law. Current and potential stakeholders, in the telecommunications sector, are liable to these regulations.

Prior to the publication of such regulations in the Official Gazette, the TRA sent them to the Council of State (via the Minister of Telecommunications) for review;

the guidelines' compliance with the Council of State's Regulation (Articles 57 and 58) was deemed essential.

3.6 REPORTING

The TRA fulfilled its obligations by submitting its financial and administrative reports to the Council of Ministers and the Audit Court via the Minister of Telecommunications as provided for in the Telecommunications Law and the article 5 of the Administrative and Financial Decree 14264.

As provided for in the article 22.1 of Financial and Administrative Decree 14264, and following the appointment of a certified audit firm for reviewing the financial accounts of the period starting from February 8th up to December 31st 2007, the TRA submitted for approval by the Council of Ministers and the Audit Court, its audited 2007 financial reports via the Minister of Telecommunications. The financial reports included a short and long forms audit reports, the internal control systems and procedures as well as the internal audit system.

It is also important to note that the TRA drafted a budget for 2008 that was approved by the Ministers of Telecommunications and Finance, in line with the Telecommunications Law and Decree 14264/2005 (The TRA Administrative and Financial Regulations).

With the aim of empowering Lebanon to regain its leading role in the Telecommunications field, and to benefit from the experience and support of other countries and Authorities, the TRA participated in a number of international and regional events. These have included attending and lecturing at sessions and workshops that dealt with topics related to the TRA's regulatory

work. The following are examples of some of the topics: spectrum and broadcasting management, international and regional mobile agreements, pricing, interconnection, mobile multimedia convergence, telecommunications laws and regulations in the Middle East, unique digital identity and sharing.

“The TRA participated in a number of international and regional events. These have included attending and lecturing at sessions and workshops...”





LOOKING FORWARD

- 1** Issuance of a decree approving the final organizational chart for the TRA, in line with the achievements of the TRA's administrative and financial independence.

- 2** The training of the TRA team, through their participation in international workshops and conferences, will continue.

- 3** Clear procedures and mechanisms for legislative and executive operations will be determined, beginning in 2009.

- 4** As part of a heightened public relations campaign, various activities and workshops that bring the TRA, the media, and sector partners together will be organized.

- 5** The TRA's official website will be further developed; viewers will be able to access the latest telecommunications news in both a swift and interactive manner.

- 6** The TRA's Intranet will be improved and re-launched. Information sharing inside the office will be hassle-free.

- 7** The TRA's periodical newsletter will be distributed in both English and Arabic.

- 8** Signing of Memorandum of Understanding with related governmental institutions, of which the Ministry of Defense and the General Directorate of Customs, and starting the implementation process.

- 9** The TRA's financial and administrative independence will be reached; this is partly reliant on the fees to be collected directly from Service Providers.



**FINANCIAL
STATEMENTS**

	40 148	2547	
		24 392	
804	565	514	
102	190	185	
	1 600	553	



TRA Balance Sheet

As of 31 December

ASSETS	2008	2007
Property and equipment	824,230,683	300,196,091
Intangible assets	309,457,662	210,780,317
Other assets	11,030,000	-
Total non-current assets	1,144,718,345	510,976,408
CURRENT ASSETS		
Contributions receivable	40,000,000,000	20,000,000,000
Other debtors	316,014,371	34,126,667
Cash and cash equivalents	366,296,769	2,416,957,854
Total current assets	40,682,311,140	22,451,084,521
Total Assets	41,827,029,485	22,962,060,929
LIABILITIES		
Current Liabilities		
Advances payable	9,000,000,000	4,500,000,000
Other creditors	1,894,580,950	1,184,345,595
Total current liabilities	10,894,580,950	5,684,345,595
Net assets	30,932,448,535	17,277,715,334
Total net assets and liabilities	41,827,029,485	22,962,060,929

All figures are in Lebanese Pounds

TRA Income Statement

For the year

	2008	FROM 8 FEBRUARY TO 31 DECEMBER 2007
REVENUES AND GRANTS	405,936,482	301,500,000
EXPENSES		
Salaries, allowances & contractual personnel expenses	(3,624,297,688)	(1,659,398,655)
General and administrative expenses	(3,105,465,296)	(1,351,557,500)
Total expenses	(6,729,762,984)	(3,010,956,155)
Negative exchange differences	(21,440,297)	(12,828,511)
Change in net assets	(6,345,266,799)	(2,722,284,666)
Net assets at the beginning of the year	17,277,715,334	-
Contributions during the year	20,000,000,000	20,000,000,000
Net assets at the end of the year	30,932,448,535	17,277,715,334

All figures are in Lebanese Pounds

TRA Cash flow statement

For the year

**FROM 8 FEBRUARY
2008 TO 31 DECEMBER 2007**

CASH FLOWS FROM OPERATING ACTIVITIES

Change in net assets	(6,345,266,799)	(2,722,284,666)
Add depreciation	176,651,748	32,229,090

ADJUSTMENTS:

Change in other assets	(11,030,000)	-
Change in other debtors	(281,887,704)	(34,126,667)
Change in advances payable	4,500,000,000	4,500,000,000
Change in contributions receivable	(20,000,000,000)	(20,000,000,000)
Change in other creditors	710,235,355	1,184,345,595
Net Cash used in operating activities	(21,251,297,400)	(17,039,836,648)

CASH FLOWS FROM INVESTING ACTIVITIES

Acquisition of property and equipment	(636,969,786)	(320,483,308)
Acquisition of intangible assets	(162,393,899)	(222,722,190)
Net Cash used in investing activities	(799,363,685)	(543,205,498)

CASH FLOWS FROM FINANCING ACTIVITIES

Contributions during the year	20,000,000,000	20,000,000,000
Net Cash generated from financing activities	20,000,000,000	20,000,000,000

Net change in cash and cash equivalents	(2,050,661,085)	2,416,957,854
Cash and cash equivalents at the beginning of the year	2,416,957,854	-
Cash and cash equivalents at the end of the year	366,296,769	2,416,957,854

All figures are in Lebanese Pounds



ORGANIZATION STRUCTURE

