



Regulatory Framework to deploy, operate and lease infrastructure of indoor wireless telecom networks

In the Arab Republic of Egypt

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Regulatory Framework to establish, operate and lease infrastructure of indoor wireless telecom networks

Prelude

Whereas the National Telecommunications Regulatory Authority of Egypt (NTRA), pursuant to Law No.10 of 2003 on Telecommunication Regulation, is the sole entity authorized to regulate telecom sector through implementing the policies set to develop and disseminate telecommunications, in different types, in line with the recent technology thereof, and to ensure all the requirements of individuals, as well as corporate, productive, administrative and servicing sectors are met with respect to telecom services, and at the most affordable prices, and to encourage investment on non-monopolistic basis under the umbrella of free and open competition among national and international expertise, guaranteeing the transparency of information, provision of inclusive services and protecting user rights;

Whereas NTRA is the sole entity authorized to grant licenses and permits to companies or organizations wishing to provide and/ or operate telecom services, or work in telecom sector, oversee and track the performance thereof, and set the general rules to ensure legitimate competition;

Whereas NTRA granted license to four companies to deploy mobile infrastructure and provide mobile phone services within the Arab Republic of Egypt;

Whereas the State of Egypt and the concerned authorities thereof expand in the construction of elevated multi-purpose facilities within different 4th generation as well as urban development projects, and since this type of facilities requires a reliable mobile coverage, and due to the fact that mobile services inside such facilities are widely affected because of poor mobile signal at some areas within such buildings, for their constructive nature;

Whereas NTRA seamlessly seek to provide high-quality telecom services for users in the Arab Republic of Egypt, particularly inside residential or business facilities which sometimes have poor mobile signal, due to the large crowd that affects mobile coverage and inflict damage on service quality;

And due to the coordination challenges encountered by mobile service operators and real estate developers to deploy a shared mobile infrastructure inside buildings within the timelines set forth for accomplishing such projects as well the high cost of such networks, and in line with the State's plan to establish many smart cities during the current era, a Neutral Host, in charge of deploying, operating and leasing the basic infrastructure of indoor wireless telecom networks for mobile operators will improve coverage and enhance telecom service quality.

In witness thereof, NTRA decided to establish the said Framework to regulate the process of deploying, operating and leasing the basic infrastructure of indoor wireless telecom

networks, in accordance with the terms and conditions of Law No.10 of 2003 on Telecommunication Regulation.

First: Definitions

1. **NTRA/ Licensor:**

The National Telecommunications Regulatory Authority of Egypt

2. **User:**

Any natural or juridical person receiving or utilizing mobile phone service indoors.

3. **Distributed Antenna System (DAS):**

A number of antennas installed and distributed inside facilities and connected via optical fiber or co-axial cables to the indoor mobile station (MS), which is supplied by a secured stand-alone power resource and connected to the mobile operator's core network

4. **Mobile Service Provider:**

Any company licensed by NTRA to provide mobile phone services within the Arab Republic of Egypt.

5. **Basic network service provider:**

Any company licensed by NTRA to create and establish communication links for others within the Arab Republic of Egypt.

6. **Licensee:**

Any company licensed by NTRA to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks.

7. **Customer:**

Any juridical person entering into contract with the Licensee to lease the basic infrastructure of indoor wireless telecom networks, in accordance with the terms and conditions herein.

8. **Facility Developer/ Owner**

Any natural or juridical person owning, or in charge of developing the facility.

9. **Public Safety and Security Network Operator**

The entity operating the telecom networks of public safety and security's personnel and service providers.

10. **Repeater:**

The device used for boosting mobile network signal inside residential or business facilities or units.

11. **Majority Shareholder:**

The shareholder owning more than 20% of shares of the entity applying for License.

Secondly: Status quo of indoor mobile coverage:

Facilities are currently covered by mobile services through either of the solutions to follow:

- Mobile Service Providers provide indoor coverage through outdoor cell sites installed to cover a particular geographical area within which such facilities are located.
- Mobile Service Providers install Repeaters:
 - For users experiencing poor mobile signal and coverage within their facilities, on condition that such facilities should have certain features and technical capacities that allow mobile operators to install Repeaters.
 - Repeaters shall be installed by the Mobile Service Provider in their official capacity, and configured to boost the mobile network thereof exclusively, via the frequencies licensed by NTRA to the said Service Provider.
- Mobile Service Providers install mobile network components inside facilities and deploy the basic infrastructure required to operate such components, to provide an indoor mobile coverage inside these facilities, using some channels and technologies which entail Microcell Stations and DAS.

Thirdly: Distributed Antenna System (DAS)

DAS is deemed a significant technical solution used to provide mobile coverage inside facilities since it enables Service Providers to control the required indoor coverage using a low output power, in compliance with the international standards applicable.

DAS can be classified into many types as per the System's components:

3-1 Passive DAS

- Signal is distributed from Base Transceiver Station BTS / Node-B/ eNode-B to antennas inside facilities using passive components such as co-axial cables and splitters
- Signal level varies according to how far the antenna is located from the BTS (signal source), therefore an accurate calculation of link budget and ensuring that signal level at each antenna is not below normal levels, are required to design Passive DAS.
- As per global practices, Passive DAS is used for small and intermediate facilities of areas smaller than 11000 m².

3-2 Active DAS

- Radio Remote Heads (RRHs) are disseminated inside facilities where digital signal is transmitted from the core unit (signal source) and distributed via optical fiber or Ethernet cables to RRHs, which in turn transfer digital signals into analog before being transmitted to antennas.
- Active DAS is used for covering wide areas of high population density, being compatible with different frequencies and technologies. It's further used for

covering tunnels and long distances, as two or more facilities could be covered by one BTS.

3-3 Hybrid DAS

- This system is a mixture of Passive DAS and Active DAS
- It's used for meeting the various requirements of Users inside the same facility, as Active DAS is used at locations where there is a large number of users, whereas Passive DAS is used where the user-density inside facilities is low.

Fourthly: Service Regulatory Framework

4-1 Operational module

Deploying, operating and leasing basic infrastructure of indoor wireless telecom networks entail many parties as follow:

- **End-user:** Any natural or juridical person subscribing to the mobile service provided by a Mobile Service Provider and receiving such service using the basic infrastructure of indoor wireless telecom networks through DAS.
- **Operator of Basic infrastructure of indoor wireless telecom networks:** The company which will be licensed by NTRA to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks, using DAS, and undertake deploying, operating and leasing the basic infrastructure of indoor wireless telecom networks for Mobile Service Providers, using DAS, to be linked to the networks of mobile operators and used to provide indoor mobile services for end-users.
- **Mobile service providers:** The companies licensed by NTRA to provide mobile service and draw up contracts with the operator of the basic infrastructure of indoor wireless telecom networks, to use the DAS designed and operated, according to the following measures:
 - Mobile service provider shall deploy the devices thereof inside a specific room assigned for telecommunication purposes, provided by the operator of the basic infrastructure of indoor wireless telecom networks.
 - Mobile service provider shall link the indoor DAS to the networks thereof and use it to provide mobile services for the end-user inside facilities.
- **Infrastructure service provider:** The company licensed by NTRA to create, lease for others within the Arab Republic of Egypt, and provide for Mobile Service Providers the communication links required to connect indoor networks with the outdoor network components of the Licensee.
- **Facility developer/ manager:** The entity owning or managing the facility, which enters into contract with the operator of the basic infrastructure of indoor wireless telecom networks to deploy, operate and lease, for Mobile Service Providers, the basic infrastructure of indoor wireless telecom networks.

Party	Main role
User	The mobile service subscriber utilizing service inside facility.
Mobile service providers	Provide mobile services for end-users.
Infrastructure service provider	Provides communication links to connect the indoor network with outdoor mobile network components.
Operator of the basic infrastructure of indoor wireless telecom networks	Designs, operates and leases DAS to be used by mobile service providers.
Facility developer/ manager	Carries out the administrative and maintenance tasks required for the facility.

Grid 1: Parties and the roles thereof

4-2 Regulatory module

- Basic infrastructure of indoor wireless telecom networks within the Arab Republic of Egypt shall not be deployed, operated and leased without a license granted by NTRA in accordance with the terms and conditions stated herein.
- NTRA shall grant licenses allowing the Licensee to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks, as a Neutral Host, within the Arab Republic of Egypt.
- Terms of applying for license to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks shall by NTRA be set, as stipulated in Fifthly of this Framework, to ensure that applicants have the financial solvency and expertise required.
- Proposals submitted to obtain the License shall by NTRA be studied and evaluated, in terms of meeting the conditions set forth and according to the feasibility study made by the applicant.
- NTRA shall regularly assess the performance of Licensees to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks, for evaluation purposes of this regulatory framework.
- This Regulatory Framework complies with the terms and conditions of Law No.10 of 2003 on Telecommunication Regulation as well as legislations, rules, regulations and decrees applicable in the Arab Republic of Egypt.
- The company which obtained the License to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks shall obtain all and every legal and administrative approvals necessary from the concerned official entities, as entitled by the terms and conditions of Law, so as to carry out the activities thereof in accordance with the laws and regulations applicable, including national security clearances.
- All basic infrastructure-related parties, subject to the said Regulatory Framework, shall abide by all rules established by NTRA to identify the liabilities of each party, before, during and post the process to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks.
- Without prejudice to the terms and conditions of Chapter 6 (Article # 64) of Telecommunication Law No.10 of 2003, the licensee shall not use the basic

infrastructure and licensed systems whatsoever in any activities that may threaten or endanger national security.

Fifthly: Deploy, operate, lease basic infrastructure of indoor wireless telecom networks – main features:

5-1 License duration

Fifteen renewable years, and shall be also renewable for further durations, 10 years each, in accordance with Law No. 10 of 2003 on Telecommunication Regulation and the measures set forth in applicable licenses and laws.

5-2: Financial commitments

- **License fees:** To be paid once, upon License signature.
- **Annual fees:** 3% of the total revenues per annum, in return for the service License and at a minimum value determined by NTRA.
- **Financial burden:** A sum of money paid per annum and amendable every three years, given that the new figures shall not exceed the old and shall include the inflation factor as announced by the Central Bank of Egypt CBE, to be paid to NTRA on the first business day of the calendar year throughout the License duration.
- **Credit:** The Licensee shall, upon License signature and to ensure complying with all commitments stipulated herein, submit an unconditional letter of credit to ensure the adherence thereof to all terms of the License.
- **Bearing the burdens of Universal Service:** The Licensee shall follow the Universal Service rules and take part in bearing the cost thereof, according to NTRA rules and in compliance with the terms and conditions of Telecommunication Law No.10 of 2003.

- **Contribution to scientific research and training:**
 - The Licensee shall contribute to scientific research, education and training programs pertaining to telecommunication and information technology, as well as other relevant fields, by a minimum rate of 0.5% out of the total revenues thereof per annum, in accordance with the rules established by NTRA in this regard.

Whereas NTRA shall release the figures required hereby.

5-3: Major rights and commitments:

- The Licensee is entitled, by virtue of License, to conduct tasks of deploying the basic infrastructure of indoor wireless telecom networks using DAS, with the purpose of leasing such to mobile phone service providers, in accordance with the terms and conditions of the License issued therefor.
- The Licensee shall deploy the basic infrastructure of indoor wireless telecom networks for at least 10 facilities per annum within three years effective the date the License was issued, and be exempted from such commitment in case of a force majeure left to the discretion of NTRA.
- The Licensee shall not deploy the basic infrastructure of indoor wireless telecom networks at facilities using any systems or technologies save DAS, unless a written pre-consent is obtained from NTRA and in accordance with the standards and criteria established by NTRA with regard to such.
- An initial contract shall be signed by and between the Licensee and at least one Mobile Phone Service Provider to lease the basic infrastructure of indoor wireless telecom networks, before deployment. Should the Licensee wish to deploy the basic infrastructure of wireless telecom networks without signing an initial contract with any Mobile Service Provider, a pre-consent in writing shall be obtained from NTRA.
- The Licensee shall commit to all general network safety and security criteria established by safety and security network operators, while designing and deploying the basic infrastructure of indoor wireless telecom networks.
- The Licensee shall, while deploying the basic infrastructure of indoor wireless telecom networks, commit to all construction criteria and codes complied with to deploy telecom infrastructure, and all technical criteria as well as specifications pertaining thereto, as drafted by NTRA, as well as according to the recommendations of the International Telecommunication Union (ITU) with this regard.
- The Licensee shall, while deploying the basic infrastructure of indoor wireless telecom networks, ensure the operation thereof with a service level complying with the technical metrics applied worldwide, the technical specifications drafted by NTRA, and those stipulated in the agreements drawn up with mobile operators (Leasers) in the Arab Republic of Egypt.
- The Licensee shall obtain a pre-consent in writing from NTRA, before completing the possession operations carried out for the basic infrastructure of indoor wireless telecom networks owned to others, to be used to provide the services subject of License.
- The Licensee has the right to make available or lease the basic infrastructure of indoor wireless telecom networks to one or more mobile operators, in

accordance with an agreement entered into by and between the Licensee and the Mobile Phone Service Provider (Leaser), given that the Licensee shall obtain NTRA's written consent to this agreement prior to the activation thereof.

- The Licensee has the right to make available or lease the basic infrastructure of indoor wireless telecom networks to other parties than Mobile Phone Service Providers, on condition of obtaining NTRA's written pre-consent, case by case, and in accordance with the terms and conditions set out by NTRA with this regard.
- The Licensee shall draft a contract with the manager/ real estate developer of the facility prior to commencing the tasks to deploy the indoor basic infrastructure, in accordance with a contract module approved by NTRA before being activated, and particularly including the items to follow:
 - The Manager/ Real Estate developer of the facility shall construct and make available rooms, spaces and tracks for telecommunication.
 - Both parties shall abide by the technical as well as operational specifications and terms provided for in the Egyptian Code for Design and Construction of Fiber Optic Networks in Buildings and Facilities, pursuant to Minister of Housing, Utilities and Urban Communities' Decree No. (818) of 2020, or any amendments thereto, and the terms and conditions set out by NTRA with regard to the same.
 - The Manager/ Real Estate Developer of the facility shall allow mobile phone service providers to visit the facility in order to perform the necessary measurement and inspection operations.
 - Both parties shall abide by the rules of resolving disputes arising from the agreement as well as the terms, conditions and measures of the termination thereof.
- The Licensee shall supply/ lease the necessary sustainable power to the customer thereof, should the latter wish to.
- The Licensee shall take all necessary measures to provide the basic infrastructure thereof for more than one customer, particularly when entering into contract with any customer.
- The Licensee shall take all necessary measures to protect and safeguard the basic infrastructure deployed pursuant to the License granted hereto, and follow the instructions of NTRA with this regard.
- The Licensee shall make available/ lease the basic infrastructure thereof for customers without discrimination and does not have the right to refrain from providing the services requested by any entity whatsoever, without justifications subject to the discretion of NTRA.

- The Licensee shall not use the basic infrastructure, subject of License, for purposes unspecified in the License, unless a written pre-consent is obtained from NTRA.
- The agreement (contract) entered into by and between the Licensee and the customer (Leaser) thereof shall entail all necessary terms and conditions specifying the nature of contractual relation between both parties, particularly:
 - Services provided by the Licensee to the Leaser.
 - Leasing terms such as lease duration and value as well as contract renewal intervals.
 - The entity responsible for installing the antennas and devices, and the liability thereof for mis-installation consequences.
 - Agreed maintenance and security tracks and systems of connection links established among devices, antennas as well as dishes.
 - Liability of both parties for the security of dishes, antennas and devices, whenever each party carries out the maintenance and installation tasks thereof.
 - Systems to adjust or change the location where the devices of the Leaser's are installed shall be agreed to.
 - The right of the Leaser to have the devices thereof at their disposal, after the contractual relation by and between the Leaser and the Licensee is over, on condition that the Leaser shall save harmless the Licensee against any damages to the properties of the latter and pay due remedies in case damages were inflicted.
 - Cell site deployment protocols, designed by NTRA and any amendments thereto, shall be applied.
 - Validity of contractual relation shall be determined, should the ownership be transferred from any of both parties to a third party.
 - Irrefutable inspection on dishes and antennas, as well as the devices pertaining thereto, in terms of weight and diameters to be compatible with the locations thereof, shall by the Licensee be conducted.
 - Service Level Agreements and the basis thereof shall be reached, mechanisms for granting due remedies shall be also allowed, from one party to another, in case the service level is below the level stipulated in Service Level Agreements.
 - Both parties shall abide by the rules of resolving disputes arising from the agreement as well as the terms, conditions and measures of the termination thereof.
- The Licensee shall, before disconnecting the service accessed by the customer (Leaser), and provided through leasing indoor wireless telecom networks, notify NTRA and the customer with such disconnection by a proper time

determined by NTRA, given that service shall not be disconnected unless NTRA's pre-approval is obtained.

- The Licensee shall take all necessary legal, organizational and technical measures and steps to secure, safeguard and maintain the confidentiality of the information and data of customers utilizing the service subject of this Regulatory Framework.
- The Licensee shall abide by all decrees, technical rules and regulations established by NTRA, pertaining to the process to deploy, operate and lease the basic infrastructure subject to this Regulatory Framework.

Sixthly: Applying for license

6-1: Applying procedures

- NTRA shall announce the Regulatory Framework post being acknowledged, and after the procedures to apply for License are open and made available.
- Companies or alliances wishing to obtain the License to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks shall submit their application to NTRA, in accordance with the data and documents determined by this article of the Regulatory Framework hereinafter, including a proof of the technical and financial capacities thereof.
- NTRA shall study and evaluate the proposals applied to deploy, operate and lease the basic infrastructure of indoor wireless telecom networks in accordance with the application criteria set forth in this Regulatory Framework as well as the feasibility study made by the applicant.

6-2: Applying terms:

- The applying company/ alliance, any affiliated firm or shareholder thereof, shall not be a mobile operator licensed by NTRA to provide mobile phone services in the Arab Republic of Egypt.
- Local shareholders shall have no less than 50% of the ownership shares of applicants.
- Should any company apply for license:
 - The company applying for license shall be an Egyptian joint company founded in compliance with the Egyptian Law, with the services subject of the Regulatory Framework, being the core business thereof.
- Should any alliance apply for license:
 - The Majority Shareholder shall have the services, subject of this Regulatory Framework, as the core business thereof.
 - The alliance shall, within a month of obtaining the license from NTRA, found an Egyptian joint company in compliance with the Egyptian Law.

- The applying alliance/ company, the Majority Shareholder or some of the companies affiliated therefrom shall enjoy a considerable expertise in:
 - Deploying basic infrastructure of wireless telecom networks for not less than two years.
 - Volume of business conducted by the applicant to deploy basic infrastructure of wireless telecom networks within the past two years shall not be less than twenty million Egyptian Pounds, in terms of value.
- Fiscal stance and financial capacity of the applying company/alliance, or the Majority Shareholder thereof shall be appropriate for the activities, subject of this Regulatory Framework:
 - Annual revenues of the applicant shall be of a value of no less than 30 million Egyptian Pounds within two previous fiscal years from date the application is submitted.
 - Applicant shall have a capital of not less than one million Egyptian Pounds.

6-3: Content of proposal

- ❖ Proposals presented shall include the following:
 - **Detailed information about the company/ alliance** (Particularly: names and shares of shareholders, company address, point of contact, phone, facsimile, etc...)
 - **The company/ alliance's portfolio**
 - Introduction to the company/ alliance.
 - Organizational structure, names and shares of shareholders.
 - The company/ alliance's expertise in Egypt's market.
 - The company/ alliance's expertise in deploying basic infrastructure of wireless networks.
 - The company/ alliance's expertise in project management.
 - **Fiscal stance of the company/ alliance:**
 - Financial capacity of the company/ alliance.
 - Official financial statements for the last five years.
 - Former and current financing methods of the company/ alliance.
 - **Fifteen-year feasibility study**
 - **Administrative and organizational structure**
 - **Market / Industry analysis**
 - **Technical plan**

- Expected coverage plan, implementation mechanisms, and commitment to the minimal requirements stipulated herein.
 - Technical solutions to emergency situations.
 - Technical solutions to secure the company's equipment. pertaining to the service subject of license.
 - Service Level Agreement (SLA).
- **Marketing plan**
- Size of market and competitor possession rates.
 - Size of market expected to be possessed by the applying company/ alliance.
 - Strategic marketing plans.
 - Potential customers of the company.
- **Financial plan and risk management**
- Pricing.
 - Financial assumptions.
 - Potential revenues and costs.
 - Expected balance sheets per year including assets and commitments.
 - Expected income lists per year including all expenditure and revenues.
 - Potential cashflow per year
 - Required capital, Internal Rate of Return (IRR) and expected interval for capital recovery.
 - Financing and the sources thereof.
 - The nature of expected risks pertaining to this field, and how to avoid such.