

REPUBLIC OF RWANDA



RWANDA UTILITIES REGULATORY AGENCY

GUIDELINES FOR SHARING OF FIBER AND DUCT INFRASTRUCTURE

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Table of Contents

1. Background.....	iii
2. Short title, extent and commencement	2
3. Definitions.....	2
4. Objectives	3
5. Minimum Requirements and Guidelines.....	4
5.1. Basic Requirements.....	4
5.2. General Principles	5
6. Price-Setting for Passive Infrastructure Sharing	7
6.1. Basic Principles.....	7
6.2. Price setting methodologies.....	7
6.3. Fully allocated cost approach.....	8
7. Contractual Arrangements and Timelines	10
7.1. Reference Contract.....	10
7.1.1. General Obligations	10
7.1.2. Filing of Contract.....	10
7.2. Basic Process and Timing for Site Sharing.....	10
7.2.1. Basic Ordering Process.....	10
7.2.2. Timelines	11
7.3. Coming into Force of Guidelines.....	12
7.4. Procedure in case of non-payment of invoices	12
8. Annexes.....	14

1. Background

Rwanda Utilities Regulatory Agency (**RURA**) was established by the law no. 39.2001 of 13/09/2001 as an independent national institution to regulate certain public utilities including among others telecommunications networks and services with the mission to promote transparency, protect free competition and provide inclusive service, as well as protect users' rights.

In accordance with the Law No 44/2001 of 30/11/2001 governing Telecommunications, Rwanda Utilities Regulatory Agency has the mandate to regulate the telecommunications sector, to enhance and deploy services in compliance with the most advanced technology to meet user's needs at the most suitable prices.

In carrying out its mandate, the Regulatory Agency is required to have due regard to the preservation and protection of the environment, the conservation of natural resources and the health and safety of users.

Thus one main objective of RURA is to enhance infrastructure sharing among telecom operators by putting in place a conducive environments for such sharing so as to avoid duplicate investments in essential infrastructure, such as optical fiber and duct installations.

To this respect, RURA has developed these guidelines that will set out the procedures to be followed by operators and service providers in providing access to fiber and duct infrastructure. In line with Article 48 of Telecom Law stating that;

“Agreements for the sharing of facilities must be negotiated directly between telecommunications network and utility operators. In the event that the terms enclosed with such agreements cannot be agreed on either party may request the Regulatory Board to determine these terms and in particular the compensation for the use of the infrastructure”.

These guidelines have a dual focus in (1) pre-empting the failure of negotiated agreements, and (2) accelerating the conclusion of such agreements related to Dark Fiber and Duct Infrastructure sharing.

These guidelines shall therefore be followed by licensed telecom operators during the negotiation of fiber and duct infrastructure sharing agreement.

2. Short title, extent and commencement

- i) These guidelines shall be referred to as:

‘Guidelines for Sharing of Fiber and Duct Infrastructure, 2012.’

- ii) These guidelines shall be applicable to all licensed operators and service providers in the telecommunications sector who own or control fiber and/or duct installations and/or wish to get access and make use of such infrastructure. These guidelines refer to passive infrastructure sharing as defined below.
- iii) These guidelines shall come into force with effect from **01 April 2012**

3. Definitions

- (a) **Active infrastructure Sharing:** Active infrastructure sharing is the sharing of electronic infrastructure and facilities. This may include sharing of transmission equipment, microwave radio equipment, spectrum, antennae, feeder cables, Radio Access Network (RAN), billing platforms, switching centers, routers, Base Station Equipment, Base Station Controller (BSC) /Radio Network Controller (RNC), optical Fiber/ wired access and backbone transmission network, database etc.
- (b) **Authority:** Means Rwanda Utilities Regulatory Agency (RURA)
- (c) **Infrastructure provider:** Means any telecommunication operator or service provider, who owns or is in control of a facility or infrastructure to which another operator or service provider desires to get into an agreement for the purposes of collocation or infrastructure sharing.
- (d) **Infrastructure seeker:** Means any telecommunication operator or service provider who desires to get into an agreement with another telecommunication operator or service provider, who owns or is in control of telecommunication’s infrastructure and facilities, for the purpose of collocation or infrastructure sharing.
- (e) **Passive Infrastructure sharing:** Passive infrastructure sharing is the sharing of non-electronic infrastructure and facility. This may include dark fiber, ducts (for the installation of optical fiber), sharing of physical sites, buildings, shelters, towers/masts, electric power supply and battery backup, grounding/earthing, air conditioning, security arrangement, poles, trenches.

- (f) **Telecommunication facility:** Any cables, wires, lines, wave guides, antennas and any other equipment that is used or associated with the provision of one or more telecommunications services.
- (g) **The Law** means the Telecommunications Law of Rwanda

4. Objectives

The objectives of these guidelines are as follows:

- To protect the social and physical environment from potential negative impacts, while at the same time not restricting the development of essential telecommunications infrastructure.
- Minimize disturbance to the environment and loss of amenity in the provision of the telecommunications infrastructure.
- To protect the environment by reducing the land use as well as infrastructure and facility installations thereby not changing the aesthetic of the country's landscape.
- To maximize the use of network facilities including but not limited to network capacity and capabilities, base station sites, backbone, towers etc.
- To proportionate infrastructure ownership that shall enhance sharing and reduce dependency, as well as duplication of investment for network facilities. In this context "Infrastructure sharing means the joint use of telecommunication infrastructures and facilities by two or more operators. The term "Infrastructure sharing" for the purposes of these guidelines refers to the Passive Infrastructure sharing.
- To promote the availability of wide range of high quality, efficient, cost effective, and competitive telecommunication services throughout the country by ensuring optimum utilization of telecommunication resources.
- To optimize operator's capital expenditure on supporting infrastructure.
- To provide rules for price setting in a transparent, non-discriminating way for access to passive infrastructure sharing.

5. Minimum Requirements and Guidelines

5.1. *Basic Requirements*

In accordance with the provisions of article 48 of the Telecom Law, if practicable to do so, a licensee shall not refuse, obstruct or in any way impede another licensee in the making of any infrastructure sharing arrangement.

An infrastructure seeker or infrastructure provider shall not negotiate or propose to enter into an infrastructure sharing agreement where the Authority determines that:

- (a) infrastructure sharing would endanger life or safety, or irreparably damage property or threaten the integrity, security or interoperability of a telecommunication network/service
- (b) the licence issued to the infrastructure provider exempts it from the obligation to provide infrastructure sharing;
- (c) the licence issued to the infrastructure seeker does not authorize it to operate the telecommunication network or to provide the telecommunication service for which infrastructure sharing is sought; or
- (d) the requested infrastructure sharing is contrary to the laws of Rwanda or the public interest.

An infrastructure provider shall not refuse to provide infrastructure sharing services, except, as provided by article 48 of the law, where:

- (a) It is not economically reasonable to allow such use;
- (b) It likely causes damage to the nature or function of such infrastructure;
- (c) Major additional construction is required;
- (d) Other technical considerations may endanger his/her telecommunications infrastructure

Either claim has to be verified by an independent certified engineer or expert appointed by a committee composed of the Authority and operator(s) involved after the matter has been referred to the Authority. This appointment will be handled on a case-by-case basis.

Where an infrastructure seeker disagrees with the basis for any refusal, it may refer the matter to the Authority.

Infrastructure sharing arrangements shall be concluded as quickly as possible and in any event, no later than the time limits set out in these regulations, unless otherwise agreed between the parties.

5.2. *General Principles*

The following general principles and guidelines shall apply to the provision of infrastructure sharing services:

- (a) each licensee has an obligation to treat requests, to negotiate infrastructure sharing agreements and to provide infrastructure sharing services in good faith;
- (b) consistent with the Law, licensees shall, in the first instance, attempt to reach agreement on infrastructure sharing by negotiation; to pre-empt a failure of such negotiations and to accelerate the conclusion of negotiations, licensees shall follow these guidelines; where there is a dispute, the parties may refer the matter to the Authority for resolution;
- (c) infrastructure sharing services shall be provided by the infrastructure provider to the infrastructure seeker at reasonable rates, on terms and conditions which are no less favorable than those provided by the infrastructure provider to itself, any non-affiliated licensee or any subsidiary or affiliate of the infrastructure provider and shall be of no less favorable quality than that provided by the infrastructure provider to itself, any non-affiliated licensee or any subsidiary or affiliate of the infrastructure provider;
- (d) infrastructure sharing rates shall be determined in a transparent manner;
- (e) costs and tariffs shall be sufficiently unbundled so that the infrastructure seeker shall be obliged to pay the infrastructure provider only for the network elements or infrastructure sharing services that it requires;
- (f) costs shall be borne either by the infrastructure seeker or the infrastructure provider or both based on whether their respective requests and compliance with those requests cause those costs to be incurred; and in accordance with an infrastructure sharing agreement between the two parties;
- (g) infrastructure sharing rates shall be cost-based and shall be set to allow the infrastructure provider to recover a reasonable rate of return on its capital appropriately employed, all attributable operating expenditures, depreciation and a proportionate contribution towards the infrastructure provider's fixed and common costs;

- (h) infrastructure sharing rates shall not include compensation for loss of business as a result of providing infrastructure sharing services to the infrastructure seeker;
- (i) infrastructure sharing services shall be provided in a manner that -
 - (i) maximizes the use of telecommunications networks and infrastructure;
 - (ii) minimizes the potential for negative environmental impacts; and
 - (iii) enables the development of competition in the provision of telecommunications networks and services in a timely and economic manner;
- (j) infrastructure sharing services shall be provided by the infrastructure provider to the infrastructure seeker at technically feasible points and routes on terms and conditions that are just, reasonable and non-discriminatory and in accordance with an infrastructure sharing agreement between the two parties; the infrastructure provider shall prepare a list of feasible points and routes suitable for infrastructure sharing;
- (k) any disputes relating to infrastructure sharing shall follow a dispute escalation procedure (part of the reference contract) and may ultimately be referred to the Authority ; and
- (m) failure to comply with any provision of these regulations shall be followed by remedies available under the Law or the licensee's licence.

6. Price-Setting for Passive Infrastructure Sharing

6.1. *Basic Principles*

An infrastructure provider's charges for infrastructure sharing shall be:

- (a) determined in a transparent manner, subject to any confidentiality claims to which the Authority has to agree; in order to assure transparency, details on how charges for infrastructure sharing have been determined, may need to be disclosed to the Authority upon request;
- (b) non-discriminatory in order to ensure that an infrastructure provider applies equivalent conditions in equivalent circumstances in providing equivalent services, as the infrastructure provider provides for itself, any non-affiliated licensee or any subsidiary or affiliate of the infrastructure provider;
- (c) reciprocal for the same service in order that the infrastructure provider and infrastructure seeker pay the same rate for providing each other the same services, except for any applicable contribution towards an access deficit that may be approved by the Authority;
- (d) preferably such that non-recurring costs shall be recovered through non-recurring charges and recurring costs shall be recovered through recurring charges;
- (e) such that charges that do not vary with usage shall be recovered through flat charges and costs that vary with usage shall be recovered through usage-sensitive charges; and
- (f) initially based on a fully-allocated cost methodology; RURA reserves the right to call for a consultation process to determine whether a forward-looking long-run incremental cost methodology is applicable to Passive Infrastructure sharing.

6.2. *Price setting methodologies*

6.2.1 When determining the maximum prices for infrastructure sharing, there are three basic approaches:

- leaving price-setting to the market, i.e. based on negotiations between licensees
- price-setting based on benchmarking
- cost-based price setting

6.2.2 **Negotiation-based price setting** is most adequate, if there is an efficient market of players with similar market power. However, in case of

one (or few) dominant players, negotiation-based prices will lead to sub-optimal results, as dominant players can exert their market power to determine actual price levels. In addition, negotiation-based price setting is often highly intransparent and the public interest is usually not taken into consideration.

6.2.3 Price-setting by benchmarking is an often used efficient method e.g. to quickly reduce prices to (international) best-practice prices. One major problem with benchmarking is the choice of reference countries, which can lead to widely varying results and gives an additional difficulty of how to adjust prices to local market circumstances.

6.2.4 Cost-based price-setting is a most widely used approach by regulators to set prices at levels of an efficient operator. The two main approaches (each of which comes with different variants) are Long-Run-Incremental Cost (LRIC) and Fully-Allocated Cost (FAC). According to economic theory, both approaches will converge to the same results, if they are based on current costs of an efficient operator and use a full-service (or long-run average) increment. However, in most cases, LRIC-based cost models lead to lower prices, by using a more narrow definition of the actual service increment or by applying forward-looking efficiency improvements.

6.3. *Fully allocated cost approach*

6.3.1 In the case of price-setting for infrastructure sharing, infrastructure providers shall apply - in an initial approach - a fully-allocated cost methodology, using actual cost figures from their accounting system.

RURA reserves the right to revise different price setting parameters such as depreciation period and asset life times or the applicable cost of capital (WACC).

6.3.2 A cost-based service price is defined as:

$$\text{SERVICE COST} = \text{OPEX} + \text{DEPRECIATION} + \text{RETURN ON CAPITAL}$$

While operating costs can be determined relatively straight-forward, return on capital and depreciation charges can be based on different approaches, depending on the form of depreciation. Most commonly used approaches are straight-line depreciation (used in most accounting systems) and annuities.

6.3.3 Straight-line depreciation has the advantage, that it can be easily based on operator accounts. However, the main disadvantage is that the return on capital changes significantly over time: As return on capital is based on the net book value of an asset, this net book value decreases over

the life time of an asset to zero, leading to a very high price at the beginning of the asset life time and a zero price at the end.

6.3.4 A more adequate approach for service price setting are **annuities**, as they keep the combination of depreciation and return on capital constant over the life-time of an asset. In this case the Service Cost is calculated as:

$$\text{SERVICE COST} = \text{OPEX} + \text{ANNUALIZATION FACTOR} * \text{CAPEX}$$

The formula for calculating the annualization factor of annuities is:

$$\text{Cost of capital} / \{1 - [1 / (1 + \text{cost of capital})]^{\text{asset life}}\}$$

6.3.5 Infrastructure Providers are advised to base their price calculation on annuities. Infrastructure Providers may be requested to present detailed calculations to the Authority.

7. Contractual Arrangements and Timelines

7.1. *Reference Contract*

7.1.1. General Provisions

7.1.1.1 RURA requests infrastructure providers to develop a reference contract, which is in line with the provisions of these Guidelines.

7.1.1.2 To accelerate the development of such a reference contract and assure a minimum level of compliance, RURA has prepared a contract template in the Annex A of these Guidelines.

7.1.1.3 Infrastructure Providers may modify or amend this reference contract template. The final reference contract should be submitted to RURA for review and filing purposes.

7.1.2. Filing of Contracts

7.1.2.1 The parties shall file a copy of any infrastructure sharing agreement, with the Authority within 7 days of the signing of the agreement.

7.1.2.2 The Authority may reject any infrastructure sharing agreement, or any portion thereof, if it determines that the agreement does not comply with the Law, conditions of the licence, relevant regulations, regulatory decisions, directives or standards and other guidelines that the Authority may prescribe.

7.2. *Basic Process and Timing for Infrastructure Sharing*

Licensees shall have a right and, when requested by other licensees, an obligation to negotiate in good faith infrastructure sharing services in order to ensure the provision and interoperability of services throughout Rwanda.

7.2.1. Basic Ordering Process

A request for a quotation to provide infrastructure sharing services shall contain at least the following information:

- (a) the reference number of the infrastructure seeker's licence;
- (b) a technical description of the requested services;
- (c) locations;
- (d) dates required; and
- (e) projected quantities to be ordered with a period of 3 years forecast.

An infrastructure seeker shall be responsible for the reasonable costs incurred by the infrastructure provider in processing the request, in granting and escorting site visits. All costs must be listed in an Annex to the reference contract.

7.2.2. Timelines

The infrastructure provider shall acknowledge receipt of each request no later than 3 working days following receipt of the request.

The infrastructure provider shall consider and analyze each request and advise the infrastructure seeker within 14 calendar days of the acknowledgement of receipt of the request, or such other time period as agreed between the parties of:

- (a) the need for any further information for purposes of having a sufficiently complete and accurate request; or
- (b) that the request is sufficiently complete and accurate to provide a quotation.

The infrastructure provider shall provide a quotation as quickly as possible and in any event no later than 30 calendar days, or within such other time period as agreed between the parties, after receipt of a complete and accurate request.

Where the infrastructure provider denies a request, the infrastructure provider shall provide detailed written reasons for such denial to the infrastructure seeker within 20 calendar days of the receipt of a complete and accurate request.

A quotation shall contain all information required by the infrastructure seeker to fully consider the rates, terms and conditions for obtaining the requested services, including the following minimum information:

- (a) date of availability;
- (b) installation intervals;
- (c) applicable rates;

- (d) request development and processing costs; and
- (e) other such necessary terms and conditions required to effect infrastructure sharing.

Within 20 calendar days of the receipt of the quotation, or such other time period as agreed between the parties, the infrastructure seeker and infrastructure provider shall undertake good faith negotiations to resolve any outstanding matters for purposes of producing an infrastructure sharing agreement.

An agreement between the infrastructure provider and the infrastructure seeker shall be concluded within 30 calendar days of the commencement of negotiations or such other time period as they have agreed.

At any stage of negotiations, either party may declare a dispute and refer the matter to the Authority, which will support a dispute resolution process.

7.3. *Coming into Force of Guidelines*

7.3.1 With the effective date of these Guidelines and the Reference Contract, all provisions of these Guidelines will come into force.

7.3.2 For currently existing infrastructure-sharing agreements, there will be no retro-active adjustment of prices paid for infrastructure shared before the effective date of these Guidelines.

7.3.3 If an existing infrastructure-sharing agreement covers a period beyond the effective date of these Guidelines and the Reference Contract, already paid fees should be adjusted to the maximum prices of the approved Reference Contract as of the effective date of these Guidelines. This adjustment could either be done through a re-imbursement or through offsetting the difference against invoices of future infrastructure-sharing agreements.

7.4. *Procedure in case of non-payment of invoices*

In case of non-payment of an infrastructure-sharing invoice, the following procedures shall be applied:

7.4.1 In case of a first-time agreement on infrastructure-sharing, access to the infrastructure will only be granted after full payment of the initial invoice has been received.

7.4.2 In case of non-payment of subsequent invoices for shared infrastructure, the following steps are applicable:

- Infrastructure provider sends three monthly reminders
- After 3rd month, a final 1 month notice is given with copy to RURA
- If full payment is still not received after a total of 4 months, infrastructure provider has the right to disconnect or remove the equipment of the infrastructure seeker from the affected site(s), and shall be compensated according to the provisions included in the signed agreement.

8. Annex

Annex A

Reference Contract: see separate File