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| **电信标准化局** | **logo_C_** |
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 2010年7月29日，日内瓦

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| 文号：电话：传真： | **电信标准化局第126号通函**TSB Workshops/P.R.+41 22 730 5235+41 22 730 5853 | - 致国际电联成员国主管部门；- 致ITU-T部门成员；- 致ITU-T部门准成员； |
| 电子邮件： | tsbworkshops@itu.int | **抄送：**- ITU-T各研究组正副主席；- 电信发展局主任；- 无线电通信局主任；- 卢旺达常驻日内瓦代表团- 负责非洲埃塞俄比亚亚的斯亚 贝巴的国际电联区域办事处主任 |

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| 事由： | **ITU-T关于光纤电缆和系统建议书的演示会（2010年9月6-17日，卢旺达基加利）** |

尊敬的先生/女士，

1 应卢旺达政府的盛情邀请，ITU-T将于**2010年9月6-17**日在卢旺达穆桑泽（Musanze）地区鲁亨盖里（Ruhengeri）市的卢旺达穆桑泽[**Gorillas饭店**](http://www.gorillashotels.com/)（[Gorillas Hotel](http://www.gorillashotels.com/)），与信息通信技术部共同举办“**关于光纤电缆和系统建议书的演示会**”。

2 演示会将于第一天的09:30时开始。与会者注册将于8:00开始。有关会议厅的详细信息将在会址入口处提供。讨论全部以英文进行。

3 演示会对所有人开放，但优先考虑作为此次活动主要对象的东非共同体国家。每位与会者须支付300美元报名费，并请通过银行转账最迟在**2010年8月24日**之前，将费用支付给以下账户：

**Account No.（账号） 240-C8108400.2**

**Account Name（账户名称）：International Telecommunication Union**

**UBS SA**

**Case Postale 2600**

**CH-1211 Geneva 2**

**Switzerland**

**Swift: UBSWCHZH80A
IBAN: CH58 0024 0240 C810 8400 2**

请通过电子邮件地址tsbworkshops@itu.int，将您的付款收据的扫描件发送给我们。

4 根据ITU-T题为“[光纤、电缆及系统](http://www.itu.int/dms_pub/itu-t/opb/hdb/T-HDB-OUT.10-2009-1-PDF-E.pdf)”的手册，此次演示会旨在帮助工程师、技师、技术专家、中层管理人员和监管人员部署基于光纤的系统，并将深刻剖析打造了全球光纤传输网络的ITU-T建议书。

与会者将更深入地了解建议书，项目的设计和实施方式以及在光线链路各部分作出最佳选择的途径。此外，与会者将学习评估功率预算和选择接口与配件的方法，并确定了起草供应合同或招标书的技术和管理规范的基本参数。

5 演示会日程草案见本协议**附件1**。更新后的日程和相关信息见以下网址：<http://www.itu.int/ITU-T/worksem/optical-fibre/201009/index.html>.

6 与此项活动相关的信息见**附件2**。

7 **住宿：**卢旺达穆桑泽的[**Gorillas 饭店**](http://www.gorillashotels.com/)（[Gorillas Hotel](http://www.gorillashotels.com/)）为指定饭店。请会议代表
直接向**Gorillas饭店集团客房预订中心**预订房间，**电话：+252 501 717 或 +252 501 718；
传真： +252 501 716；移动电话： +250 788 487 777；电子邮件：****gorillashotel@rwanda1.com**；**或****book@gorillashotels.com**。

东道国政府将提供从机场到指定饭店即会场的交通。为保证接机和送客工作，请代表们在**2010年8月31日**前填妥并交回**附件3中的代表信息表，**以提供所有的旅行信息，包括航班号、抵离日期和时间**。（请同时使用上述两个电子邮件地址发送邮件，以确保电子邮件寄达预定的收件方）**。

 8 **注册：**为便于电信标准化局就演示会的组织工作做出必要安排，希望您能通过<http://www.itu.int/ITU-T/worksem/optical-fibre/201009/index.html>以在线形式向电信标准化局**尽早**、但**不迟于2010年8月31日**进行注册。**请注意，本次演示会与会者的预注册仅以在线方式进行**。

9 请注意，一些国家的公民需持签证才能入境卢旺达。为此，可向卢旺达驻贵国的使馆或领事馆申请签证。有关签证要求的详细情况见：[**www.migration.gov.rw**](http://www.migration.gov.rw)。

顺致敬意！

电信标准化局主任

马尔科姆•琼森

**附件：3件**

**ANNEX 1**

(to TSB Circular 126)

**ITU-T Tutorial on Optical Fibres Cables and Systems Recommendations**

 **(Kigali, Rwanda, 6-17 September 2010)**

**Draft Programme**

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| **Time** | **Subjects** | **Objectives** |
| **Week 1** |  |  |
| Monday | Introduction on the ITU-T and on the objectives / structure of the Tutorial | It is an overview of the ITU, its Sectors and an introduction to ITU-T SG15, to the Handbook and to the structure of the Tutorial |
| Monday | Optical fibres characteristics ( Note. Test methods are outside the scope of the Handbook. Moreover the description of the test methods (G.650.1, G.650.2, G.650.3) requires an advance knowledge of mathematics)  | This session will provide the participants with the description of the dimensional, optical, mechanical and transmission characteristics of the optical fibres. The ITU-T types of optical fibres will be described. This will give the elements to choose the type of fibre that best meets the needs of an optical plant based on the services and systems requirements. |
| Tuesday | General characteristics of optical cables | The optical cables must protect fibres from mechanical, chemical and human activities. In particular the structure of optical cables is to be designed to protect fibres to withstand the environment where the cable has to be installed: aerial, ducts, underground, shallow water, submarine.  |
| Wednesday | Optical cables installation [ Note. Test methods are outside the scope of the Handbook.] | The installation is linked to the session before. Specific techniques, such as underground ducts, trenchless techniques, mini-trench, micro-trench, aerial, tunnels, bridges, along railways, in sewer ducts, shallow water and submarine, will be analysed. |
| Thursday | Optical splices, connectors and passive nodes [ Note. Test methods are outside the scope of the Handbook.] | Fibres and cables are produced according to factory lengths that need to be jointed in order to realize the optical links. This session will provide a description of the best techniques for the interconnection of the optical fibres and in particular the optical fibre splices, optical connectors, optical distribution frames, fibre closures, fibre organizers, etc. All these elements are necessary to guarantee an optimized transmission of the optical signal along the fibre. |
| Friday | Optical active and passive components / subsystems | There are various passive and active components in an optical/plant: optical transmitters, optical receivers, optical amplifiers, chromatic dispersion compensators, regenerators, transponders, etc. This session will provide the description of these components, will outline how they are used in the optical systems / plants and will indicate the criteria for their choice.  |

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| **Week 2** |  |  |
| Monday | General characteristics of optical systems and their specification | This part of the tutorial is of fundamental importance. Knowing the characteristics of the optical systems will give the participants the skills they need to make the right choice of equipment which are specified on the basis of applications, optical fibres, number of channels, wavelength of operation, future needs for new services, etc. |
| Tuesday | Optical systems design | In this part there is the description of the various approaches which can be followed for the design of the optical systems. Moreover the impact of the various impairments on the length of the links and on their capacity are evaluated. The main elements necessary for the design of an optical system will be given |
| Wednesday | Optical systems applications | Ability to design an optical plant for a specific application will depend on the knowledge of the subjects dealt with in all the previous sessions. An optical system design based on a given Quality of Service and on a given life-time is a “must” for any engineer in order to choose the best optical system for each application in their network and for the needs of his country. Some information on submarine systems will be also provided |
| Thursday | B- and G-PONs - xDSL, Passive Optical Networks, Broadband PON, Gigabit-PON, Digital Subscriber Lines, Wireless broadband.  | This part will complete the training showing, from a general point of view, the user-side (last-mile) of a plant/system. This is the part closer to the end-users and to the needs of the service providers. The various techniques that are presently used will be described together with their advantages and drawbacks both for wired and wireless networks. |
| Friday | Operation & Maintenance, safety and environmental aspects | Operation and maintenance are elements that the engineers have to learn in order to take actions to limit the effects of systems failures or low performance. |

**ANNEX 2**

(to TSB Circular 126)

**ITU-T Tutorial on Optical Fibres Cables and Systems Recommendations**

 **(Kigali, Rwanda, 6-17 September 2010)**

## Practical Information

1. **Meeting venue**

**The ITU-T Tutorial on Optical Fibres Cables and Systems Recommendations** will take place from **6 – 17 September 2010** at [**the** [**Gorillas Hotel**](http://www.gorillashotels.com/), Musanze, Rwanda,](http://www.ichotelsgroup.com/intercontinental/en/gb/locations/nairobi)  located at: {Ruhengeri, Musanze District (Northern part of Rwanda near gorillas park, 95 km from Kigali)

Central reservations :

Gorillas Hotels Group

P.O. Box 1782 Kigali,

Telephone : +252 501 717; +252 501 718;

Fax: +252 501 716

Mob: +250 788 487 777

Email: gorillashotel@rwanda1.com; or book@gorillashotels.com

**Website:** [**www.gorillashotels.com**](http://www.gorillashotels.com)

1. **Hotel Accommodation**

[Gorillas Hotel](http://www.gorillashotels.com/), Musanze

1. **Visa**

**For visa requirements, consult** [**www.migration.gov.rw**](http://www.migration.gov.rw)

1. **Travel and airport transfers**

Participants are responsible for making their travel arrangements. Delegates are requested to provide all travel information, including flight number, arrival and departure dates and times by completing and returning by **31 August 2010** the attached Delegate Information Form to

**Ministry in the Office of the President in charge of ICT**

**PO Box 15 KIGALI**

**Email:** **amakuza@presidendency.gov.rw**

**abusingye@presidency.gov.rw**

**rkirabo@presidency.gov.rw**

Transport will be provided to delegates:

1. On arrival and departure from the Kanombe International Airport.
2. From the designated/recommended hotel to the venue.
3. During the various social events organized for the delegates.

Note: Delegates are advised to look out for paging boards or signage with the name of the meeting. Due to the number of delegates expected, the local host may not prepare signage for each individual delegate arriving.

1. **Climate**

Rwanda has tropical climate and the average temperatures in September vary between 12°C - 27°C during the day and fall to 10°C at night.

1. **Local time**

 GMT+2

1. **Currency, banks and credit cards**

The unit of currency is the Rwandan Francs.

The indicative exchange rate, as of 20th March 2010, is:

1USD = 580 - 590 FRW

* Major international credit cards are widely accepted for transactions.
* Banks are open from 08.00am to 08.00pm Monday through Friday, and to 12 noon on Saturday
* Forex Bureaux located in different parts of the city are open from 08:00hrs to 09.00 pm Monday through Friday.
1. **Vaccination**

Yellow fever vaccination is usually required by Health authorities on arrival.

**9. Electricity**

220V/50hz

Wall round sockets with or without earth pins

**HOST COUNTRY CONTACT:**

**Mr. Abraham MAKUZA**

**Senior Expert in charge of ICT Infrastructure and Regulation**

**Ministry in the Office of the President In charge of ICT**

**P.O box 15**

**KIGALI**

**Email:** **amakuza@presidency.gov.rw**

**Tel: + 250788 835 52**

**Ms Alice BUSINGYE**

**ICT Partnership Coordinator**

**Ministry in the Office of the President In charge of ICT**

**P.O box 15**

**KIGALI**

**Email:** **abusingye@presidency.gov.rw**

**Tel: +250 788 303 954**

**ANNEX 3**

(to TSB Circular 126)

 **ITU-T Tutorial on Optical Fibres Cables and Systems Recommendations
 (Kigali, Rwanda – 6 – 17 September 2010)**

DELEGATE INFORMATION FORM

**MEETING VENUE:**[**Gorillas Hotel**](http://www.gorillashotels.com/)**, Musanze, Rwanda**located at: Ruhengeri, Musanze District (Northern part of Rwanda near gorillas park,
95 km from Kigali)

**Country** …………………………………………………………….…………

**Name of delegate** …………………………………………………………….

**Title**………………………………………………………………………………

**Organization**…………………………………………………………………..

**Email and Tel. contacts**:………………………………………………………

**Date of Arrival/Flight number**…………………………………………….

**Date of Departure/Flight number**………………………………………..

# Signature………………..……………………………………………………..

**Please return by 31st August 2010**  **to:**

**Ministry in the Office of the President in charge of ICT, PO Box 15 Kigali, Rwanda**

**Email:** **amakuza@presidendency.gov.rw**

**abusingye@presidency.gov.rw**

**rkirabo@presidency.gov.rw**