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**Specification of the
KCH Metallic Path Facility
Maintenance Code of Practice**

Issue 1

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Normative Information

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1. Foreword and Acknowledgements

In the interests of consistency and to ensure ease of use for Local Loop Unbundling operators, Kingston Communications (Hull) plc (KCH) has adopted a style and format similar to that used by the NICC PNO-IG DSL Task Group for the BT Metallic Path Facility Maintenance Code of Practice ^[1]. Kingston Communications (Hull) plc is grateful for permission to utilise formats and material from this document.

2. Scope

This specification defines the maintenance code of practice relevant to the electrical characteristics of the Metallic Path Facility (MPF) provided by KCH under the *Annex of Regulation Number 2887/2000 of the European Parliament and Council* ^[2].

3. Introduction

This document describes the two-stage approach to the maintenance of MPF's supplied by Kingston Communications (Hull) plc who are the Local Loop Provider (LLP).

Each part of the maintenance procedure specification has a charge associated with it. These charges are defined in the KC LLU Reference Offer and associated price list.

4. Maintenance Responsibility

The service received by an end user served using an MPF will depend, amongst other things, on the satisfactory operation of the MPF provided by KC and the correct design and operation of the equipment provided by the LLU Customer. KC has responsibility for the MPF and will use reasonable endeavours to ensure that it meets the published specification.

If a LLU customer, having reported a fault and received the diagnosis (i.e. 'Right When Tested' (RWT) or repaired), believes that the MPF is adversely affecting end user service they may escalate the fault to the second stage of maintenance. It is neither possible nor appropriate for KC to guarantee that the end user service will operate satisfactorily. A code of practice will describe the reasonable endeavours that KC will undertake at this stage to assist the LLU customer to restore the end user service.

Other maintenance procedures are defined in KC LLU reference offer and associated documentation.

5. Multi-Part Maintenance Specification

The MPF maintenance specification proposed by KC comprises a single specification in three parts and a single optional parameter. The MPF specification is described in a separate document [3].

The basic specification applies to all MPFs. It consists of three parts:-

Part 1

Part 1 includes parameters that can be tested using KC's exchange based line test equipment. (voltage, insulation resistance, capacitance)

Part 2

Part 2 contains a single parameter, the maximum loop resistance that any MPF will exhibit.

Part 3

Part 3 contains a single parameter the maximum insertion loss that any MPF will exhibit.

Optional parameter

The only optional parameter is the variation of insertion loss. In order to take advantage of the optional parameter the LLU customer must order an insertion loss measurement at the time of ordering the MPF. The measurement will be taken by a KC person at a time close to the MPF provision time. KC will record the measurement. The MPF in question will be guaranteed not to deviate from the initial value by more than a specified amount (specified in the MPF specification document) in the absence of another network fault condition.

6. Fault Reporting

An LLU customer reporting an MPF fault must include in the fault report a statement of the specification parts that he wishes to query. The report may be for part 1 only, parts 1 and 2, or for parts 1,2 and 3 together.

The optional loss variation parameter may be queried in addition to any of the above combinations but only for MPFs that have previously had an initial measurement taken.

When reporting a fault to KC the LLU customer may if he so wishes supply such additional information as the LLU customer considers will aid in understanding and diagnosis of the fault. KC will record the information and may, if appropriate, use such supporting information in the initial handling of the fault report.

7. Fault Handling

KC will initiate tests to determine if the MPF meets the parts of the specification that the LLU customer has specified. If the tests indicate a fault then appropriate repair activity will be initiated.

8. Line Status Report

When any repair activity has been completed or if the pair is Right When Tested (RWT) the pair will be returned to the LLU customer. KC will provide a brief report of the result of the tests conducted. This may state that the line was RWT or that it has been repaired and returned to within agreed specification limits. The report will include a statement of any relevant test results.

9. Escalation to the Second Stage of Maintenance

In most cases the LLU customer will be satisfied with the result of the first stage of fault handling. If the LLU customer believes that the MPF is the cause of end user problems despite a KC report that the MPF is within specification they will have two possible courses of action:-

1. They may issue a second fault report against the MPF. (perhaps specifying different test options) or
2. They may escalate the situation to the second stage of fault handling.

10. Second Stage of Fault Handling

The maintenance code of practice is relevant to the second stage of fault handling. The LLU Network Service Centre (NSC) will administer this stage. The NSC responsibilities will include supervision of maintenance and fault repair activities for MPFs. The NSC will have access to experienced and skilled test technicians. Escalation to the second stage is only available after a first stage fault has been handled and the report back submitted.

At this stage the LLU customer must indicate

- The reason why they believe that the pair is unsuitable for use as an MPF
- Whether or not they believe that the pair is within the agreed specification
- All additional information that the LLU customer considers will aid in understanding and diagnosing any underlying fault in the MPF.

The KC NSC will use all reasonable endeavours to discuss the situation with the LLU Operator and recommend a suitable course of action. KC will use LLU customer provided additional information where it is found to be relevant.

The KC NSC may recommend that the LLU customer carry out some further tests on their own equipment or that of the customer. This work will be the sole responsibility of the LLU customer.

If during the course of the discussion the KC NSC person believes that further investigative work by KC is justified they will be able to initiate it. The decision in this matter will rest solely with the KC NSC.

In the case where the KC NSC does not believe that further investigation by KC is warranted then the LLU customer will have the opportunity to request some further investigation on the understanding that it will be paid for in full by the LLU customer. Limits may be defined on the amount of additional maintenance work that can be requested.

11. Additional Maintenance Work

One or more defined packages of additional maintenance activity will be available. These will comprise activities that are within the capabilities of the KC field force. A package may be expected to include activity such as field inspection or test of cable plant and MPF connections at flexibility points.

12. Action in the event of an MPT 1570 enforcement order

In the special case where a service provided by means of an MPF in KC's network is the subject of an MPT1570 ^[4] related disconnection order by the Radiocommunications Agency (RA) the KC NSC must be informed as soon as possible. Where appropriate KC will deploy a specialist test and investigation team to work alongside the LLU customer people and the RA Investigation Service (RAIS) to address the situation.

13. Possible future enhancements

This MPF Maintenance specification will be used at the time of service launch. KC will discuss with LLU customers possible enhancements to this specification and hence this specification may be revised following agreement on any such enhancements.

15. Glossary

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|--------------|---|
| End user | The end customer being served by means of an unbundled local loop by the LLC or another party. In the case of shared access, this is the end customer being provided with services over a local loop by both the LLP and the LLC. |
| LLU | Local Loop Unbundling |
| LLU customer | Local Loop Customer, the operator taking up the unbundled local loop service from the LLP. The LLC, in the case of shared access, may also take on the role of Broadband Service Provider. |
| LLP | Local Loop Provider, the operator providing unbundled local loops in its local access network. The LLP, in the case of shared access, will also take on the role of Voice Telephony Provider. |
| NSC | Network Services Centre |
| Operator | A public network operator (includes LLC and LLP). |

16. References

| Reference | Standard | Title | Date |
|-----------|------------------|--|----------|
| [1] | BT MPF CoP | NICC DSL Task Group – Metallic Path Facility Maintenance Code of Practice - Issue 1 ND1804:2000/06 | 6/2000 |
| [2] | 300R2887 | Regulation (EC) No 2887/2000 of the European Parliament and of the Council of 18 December 2000 on unbundled access to the local loop (<i>Official Journal L 336 , 30/12/2000 P. 0004 – 0008</i>) | 18/12/00 |
| [3] | KC MPF – LLUP001 | Kingston Communications Metallic Path Facility Specification - Issue 1 - ND1603:2001/11 | 11/2001 |
| [4] | MPT 1570 | Radiocommunications Agency : Radiation Limits and Specification | 03/08/01 |