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Guidelines

for any Inter-Network Interference issues between DSL Operators in the same Access Network

Issue 3

Network Interoperability Consultative Committee
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Normative Information

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1. Scope

These Guidelines apply to the management of inter-network (ie crosstalk) interference issues in the BT or Kingston Communications access networks.

Note 1. Separate guidelines have been produced covering external interference (ie interference to radio users).

Note 2. The steps listed in these guidelines are not mandatory. However, network operators are expected to take reasonable steps to mitigate the harmful interference being caused by their applicable system. In the event of a dispute raised to Ofcom, Ofcom will require evidence that reasonable steps have been taken. Compliance with the checks in this document would normally be regarded as 'reasonable steps'.

2. Terminology

ANFP	Access Network Frequency Plan - the Cable Management Plan applicable to the local loop being used to provide service. (Separate ANFP apply for the BT and Kingston Communications access network and are available at http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/isc.htm).
Cable User	A DSL operator making use of the local loop infrastructure for delivering its services. (This includes both an operator providing service over another operator's local loop and the operator providing service over its own local loop.)
Cable Manager	The Local Loop Provider responsible for the provision and maintenance of the local loop infrastructure and investigation of ANFP non-compliance complaints. (For the BT access network the Cable Manager is BT; For the Kingston Communications access network the Cable Manager is Kingston Communications.)
End-user	The end customer being served by the Cable User via a local loop.
MPF Specification	Metallic Path Facility Specification - the specification applicable to the local loop being used to provide service. (Separate MPF specifications exist for the BT and Kingston Communications access network and are available at http://www.nicc.org.uk/nicc-public/Public/interconnectstandards/isc.htm).

3. Guidelines

It is expected that any Cable User within the UK will behave in an open and professional manner in the execution of their systems.

There is no simple definition of 'Interference' therefore it is expected that any investigation will be initiated on the basis of a 'end-user complaint'.

Any Cable User who believes that they are experiencing interference to one or more of their circuits should perform any reasonable tests or follow reasonable procedures prior to contacting the Cable Manager to provide justification for trouble escalation. Some possible checks are found below.

These checks are not mandatory (see Note 2 in section 1), not exhaustive and not presented in any particular order.

1. Ask the end-user what additional equipment they have connected to the line.
2. Talk to the end-user on the phone line sharing the DSL circuit on the MPF. Check to ensure there is no obvious noise on the normal POTS circuit.
3. Check for the correct operation of exchange end equipment (eg DSLAM) and customer end equipment (eg far end modem/CPE) to verify equipment performance and specification compliance. Such a check may include, but is not limited to, the use of diagnostic functions in the equipment, independent testing against exchange and CPE using compatible field-deployable "golden modem" DSL test equipment, and substitution of suspect equipment with a "known good" element which meets all applicable deployment parameters.
4. Test the MPF, if possible, to ensure it meets the MPF specification. If test equipment is available, test the MPF for noise on the MPF circuit.
5. Interference to DSL operation may be experienced in locations where there is high field strength from nearby radio transmitters. Interference can occur if the line is significantly unbalanced due to equipment, installation and/or cable issues. If the Cable User believes that the loop is in an unbalanced state then it will notify the Cable Manager of this issue. If the problem cannot be resolved through efforts of the Cable Manager and Cable User and if interference is suspected to come from an external radio transmitter, appropriate filters may need to be installed on the MPF circuit.
6. Ensure that the modems do not exceed the ANFP mask applicable to that line (taking account of any assigned line category).
7. Ensure that the cause of the complaint is not due to congestion or a fault elsewhere on the network.
8. Cable User to review their deployment rules to ensure they have been followed. Ensure that any line categorisation provided by Cable Manager has been used.

After all reasonable avenues have been investigated by the Cable Manager and the complainant Cable User, all Cable Users that the Cable Manager reasonably concludes might have an impact on the interference issue may be requested by the Cable Manager to provide information that will aid in the resolution of this issue.

Specifications to be used:

1. The relevant ANFP specification;
2. The relevant MPF specification;
3. Cable User's own deployment rules.

Other things, which may need to be reviewed:

1. Is there a history of faults, which can be tracked in order to ease the rectification of any issues?
2. All Cable Users are advised to record the circuit parameters at the time of installation and any information that their management system records on circuit performance.
3. All Cable User's are requested to ensure that their personnel do not recalibrate or modify the equipment connected to a circuit in such a way that the transmit power is increased beyond the relevant ANFP mask. Cable Users are responsible for the compliant operation of their equipment operating on MPFs.

4. History

Issue 1	March 2001	Published as NICC Doc 01-026. Applicable only to BT network
Issue 2	March 2002	Issue 1 updated to include Kingston Communications network, proposed Interference Licence Condition and to use ETP terminology.
Issue 3	July 2005	Revised to take account change of regulations (removal of licence conditions) and organisational changes.

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