Editorial Note :

These Guidelines are based on the OFTEL Guidelines Issue 2, which provided guidance on interface publication under the R&TTE Directive. They have now been amended to reflect the terminology introduced by the new EU regulatory framework and the Communications Act 2003. The technical references have also been updated.

Guidelines for Interface Publication
Issue 3

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1. Scope

This document contains guidelines that providers of Public Electronic Communications Networks should follow when publishing technical information about their customer interfaces as a result of the application of the Radio Equipment and Telecommunications Terminal Equipment (R&TTE) Directive [1] requiring publication of interfaces. Interface means either or both of a network termination point which is a physical connection point at which a user is provided with access to a public electronic communications network and an air interface specifying the radio path between radio equipment.

These guidelines cover the obligations placed upon providers of Public Electronic Communications Networks in publishing interfaces (e.g. what the publication must contain and any legal issues that have to be resolved in publication). They do not place any requirements on providers additional to those contained in The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 [2] as amended by The Radio Equipment and Telecommunications Terminal Equipment (Amendment) Regulations 2003 [3] and The Radio Equipment and Telecommunications Terminal Equipment Amendment No.2) Regulations 2003 [4] which require the publication of interfaces for all Network Services, including non-voice services. They have been developed by Ofcom in consultation with the industry and are intended to complement the EC guidelines ([5] & [6]) on interface publication, providing additional clarification where required as a guide to preferred best practice for application in the United Kingdom.

The annexes to this document provide examples of proforma templates which may be used for interface publication for different types of interface.

2. References

[1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. This was originally transposed into UK law as the Statutory Instrument 2000 No 730. The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 and came into force on 8th April 2000.

[2] The Radio Equipment and Telecommunications Terminal Equipment Regulations 2000 (SI 2000 No.730)

[3] The Radio Equipment and Telecommunications Terminal Equipment (Amendment) Regulations 2003 (SI 2003 No.1903)

[4] The Radio Equipment and Telecommunications Terminal Equipment (Amendment No.2) Regulations 2003 (SI 2003 No.3144

[5] Guidance on interface publication by public telecommunications network operators (guide 2). This guidance was produced for the European Commission and endorsed by the Telecommunications Conformity Assessment and Market Surveillance Committee, a standing Committee assisting the Commission in the management of Directive 99/5/EC.

[6] Guidance for public network operators when publishing interfaces, and NRAs/member states when supervising such publication (guide 3). This guidance was produced for the European Commission and endorsed by the Telecommunications Conformity Assessment and Market Surveillance Committee, a standing Committee assisting the Commission in the management of Directive 99/5/EC.

[7] ETSI TR 101 730, Publication of interface specification under Directive 1999/5/EC; Guidelines for describing analogue interfaces.

[8] R0BT-002/EG 201 212. Electrical safety; Classification of interfaces for equipment to be connected to telecommunication networks.

[9] ETSI TR 101 731, Publication of interface specification under Directive 1999/5/EC; Guidelines for describing digital interfaces.

[10] ETSI EG 201 838, Publication of interface specifications under Directive 1999/5/EC; Guidelines for describing radio access interfaces.

3. Obligations when publication takes place

3.1 IPR and Licensing

As part of the interface publication, the provider of a Public Electronic Communications Network publishing the interface should ensure it does not knowingly make such publication in breach of any IPR and/or copyright associated.

In so far as the publisher is aware of the same, the publisher should ensure that the publication itself contains a clear indication of

(i) any IPR and/or copyright asserted over the contents of the publication (including any specifications referred out to);
(ii) the rights granted and restrictions made to users of the specification; and,
(iii) how details of any licensing requirements associated with such IPR may be obtained.

The publisher should ensure that any licensing associated with such IPR is made available on fair and non-discriminatory terms.

3.2 Content of interface publication

The annexes to this document contain example proforma which may be used in the declaration of interface specifications. The presentation style of these Annexes is provided for illustrative purposes only.

These publications should contain information to enable terminal equipment to interwork with the public telecommunications network for the purpose of establishing, modifying, charging for, holding and clearing real or virtual connections and to prevent the misuse of network resources. They should also contain details of any supplementary services or enhanced features provided by the network that is important for the design and operation of terminal equipment. Directive 1999/5/EC [1] requires that providers of Public Electronic Communications Networks inform Ofcom about any network characteristics which are found to affect the correct operation of terminal equipment. R&TTE Article 4.2 requires that interface publications be of sufficient detail to permit the design of telecommunications terminal equipment capable of utilising all services provided through the interface and to allow the testing of terminal equipment for the relevant essential requirements. For all interfaces the relevant essential requirements include health and safety, EMC and any other requirements determined by the European Commission in collaboration with TCAM in accordance with the procedures set out in Article 15 of the Directive.

The interface publication should contain at least the information described under the headings in the proforma where relevant to that interface (notes are contained in the proforma to explain the nature and level of detail of the information required). Providers of Public Electronic Communications Networks may, if they chose, provide additional information e.g. relating to the interface definition, the services provided over that interface, facilities provided to terminal designers/users for interoperability testing, helplines. In producing the interface publication, the following points should be considered:

- **Reference to standards and specifications:** wherever possible, the interface specification should refer out to published standards and specifications. The following priority order (where 1 is highest priority) should be used to select the standards to which the publication refers:
  1. Standards listed in the Official Journal of the European Communities.
  2. European standards or specifications adopted by ETSI, or CEN/CENELEC.
  3. International standards or recommendations adopted by the International Telecommunications Union (ITU), the International Standards Organisation (ISO) or the International Electrotechnical Commission (IEC).
  4. National standards or specifications, e.g. documents produced by the Network Interoperability Consultative Committee (NICC) or its sub-committees.

  NOTE: This list does not preclude reference to accepted industry standards in the absence of a standard that is in any one of the categories above (e.g. industry standards agreed by bodies such as the ATM Forum or the IETF).

- **Options in standards:** when a standard referred to contains options, the interface specification should indicate which option(s) have been implemented. It should be noted that for some protocols, there are standards defining the associated Protocol Implementation Conformance Statements (PICS) which may be used for this purpose.

- **Supplementary services:** all supplementary services provided must be published, along with the service codes used for their actuation. (Note however that Ofcom is likely to allow shorter advance publication periods where only the codes are being changed.)

- **Reference to other documentation:** providers of Public Electronic Communications Networks may refer out to existing company documentation or published specifications (such as proprietary interface documentation) for all or part of their customer interface publication. Where such references are made, the provider should ensure that the same ease of access exists for the referenced document(s) as that applied to the customer interface publication.

3.3 Network and terminal equipment interoperability

The provider of a Public Electronic Communications Network publishing the interface, or a 3rd party, may provide facilities for interoperability testing of apparatus designed to be compatible with and to inter-operate with the published interface. The provider providing the interface may provide guidance to manufacturers on design and test standards that can be utilised to support the development of compatible customer equipment.

Whether such a facility is provided by a provider is at the discretion of that provider. When offered by a provider, the terms under which this testing facility is provided should be fair and non-discriminatory.

3.4 Publication

3.4.1 Format

It is recognised that all companies have a “house style” for all of their documentation. Customer interface publications may be made using the company “house style” but providers of Public Electronic Communications Networks should ensure that the contents of their publication provide the same information as indicated in the proforma given in the annexes to this document.

There is no requirement to have a separate publication for each customer interface; it is recognised that where customer interfaces are very similar, it may be beneficial to have all of those interfaces in a single document. Similarly, it may be desirable to specify some characteristics which are common to a number of customer interfaces (e.g. tones and announcements) in a separate publication. The criteria for deciding how to document the technical characteristics of the customer interfaces should be based on clarity, removal of ambiguity, maintainability and ease of use for the users of these publications.

3.4.2 Language and issue control

Publications should be in English (as a minimum) and be issue controlled.

3.4.3 Availability

As a minimum, the provider of a Public Electronic Communications Networks should provide details for a single point of contact to Ofcom that can provide access to all interface publications provided by that provider. The provider shall inform Ofcom immediately of any change to the given contact details to ensure that they remain current. Additionally, it is recommended that a provider provides within specific publications, contact details to enable users of the publication to contact it for the purposes of, for example, clarification or reporting errors in the publication.

Where possible, the provider should also provide a single “on-line” point of contact for information relating to accessibility of all their interface publications.

Ofcom will maintain an up to date list with the contact information for obtaining specifications from all providers of Public Electronic Communications Networks. Ofcom will make this available on request and also publish it on the Ofcom web site.

In order to minimise cost and complexity associated with distribution of publications, it is recommended that, wherever possible, providers of Public Electronic Communications Networks make interface publications available “on-line”. Where this is not possible, reasonable costs for reproduction and distribution may be levied by the publisher on an organisation or individual requesting a copy of a particular interface publication.

3.4.4 Arbitration

In cases where disputes occur related to interface publication, these should, in the first instance be settled between the parties concerned. If resolution is not possible, these disputes will be forwarded to Ofcom where arbitration will take place with advice and consultation from the NICC.

4. Acknowledgements

Ofcom acknowledges the assistance given by the NICC in the production of these Guidelines.

Annex A

ETSI TR 101 730 [6] contains guidelines for the contents of a published Analogue interface specification.

In addition to the items specified by ETSI TR 101 730, publishers of interface specifications should include as appropriate information such as:

- information on phenomena affecting the safety of interface ports, for example, the range of normal operating voltages and whether the interface is exposed or unexposed (see ROBT-002/EG 201 212 [7]);

- network operators should confirm that the interface complies with the current EMC regulations. For any additional requirements the operator should provide information to permit manufacturers to carry out the relevant tests. It would be helpful for the operator to provide any available information that would assist terminal suppliers to determine their EMC strategy.

Figures and state transition diagrams convey dynamic information on the behaviour of the network or expected behaviour of terminal equipment. Inclusion of such information will improve the quality and utility of the published interface specification.

Annex B

ETSI TR 101 731 [9] contains guidelines for the contents of a published Digital interface specification.

In addition to the items specified by ETSI TR 101 731, publishers of interface specifications should include as appropriate information such as:

- information on phenomena affecting the safety of interface ports, for example, the range of normal operating voltages and whether the interface is exposed or unexposed (see ROBT-002/EG 201 212 [7]);

- network operators should confirm that the interface complies with the current EMC regulations. For any additional requirements the operator should provide information to permit manufacturers to carry out the relevant tests. It would be helpful for the operator to provide any available information that would assist terminal suppliers to determine their EMC strategy.

Figures and state transition diagrams convey dynamic information on the behaviour of the network or expected behaviour of terminal equipment. Inclusion of such information will improve the quality and utility of the published interface specification.

Annex C

ETSI EG 201 838 [10] contains guidelines for the contents of a published Radio interface specification

In addition to the items specified in this Annex, publishers of interface specifications should include as appropriate information such as health aspects, in so far as they are within the control of the operator, for example, GSM networks affecting the radio frequency power levels of terminals.

Figures and state transition diagrams convey dynamic information on the behaviour of the network or expected behaviour of terminal equipment Inclusion of such information will improve the quality and utility of the published interface specification.