Guidelines for CLI Facilities

A consultation on revising the guidance for the provision of Calling Line Identification information

Including proposals to modify the National Telephone Numbering Plan

About this document

Calling Line Identification (CLI) provides information about the party making a telephone call. This gives consumers the ability to identify the person or organisation calling them, and to make informed decisions about how to handle incoming calls. CLI information can also be used for other functions, such as call tracing to identify the sources of nuisance calls or as a reference to help identify the location of a caller in emergency situations. Therefore, it is important that CLI data is provided correctly and delivered accurately.

We have introduced a new General Condition (GC) with new obligations on Communications Providers (CPs) to provide CLI facilities, including requirements that the CLI data provided with a call includes a valid, dialable telephone number which uniquely identifies the caller. In order to clarify what we expect CPs to do to implement these new requirements, we need to update our guidance, which sets out the principles that should be respected to ensure that CLI data can be used correctly.

These points of clarification relate to the fundamental principles, which will improve the reliability of CLI information: validity, privacy and integrity. The delivery of reliable CLI data to end-users, which respects the user's privacy, relies on the data being correct in the first place and the co-operation of all the CPs involved in the chain to pass on this information correctly. The new obligations require CPs to ensure that CLI data is exchanged between different providers with greater accuracy and only valid CLI data is made available to end users. After implementation, the quality of the CLI information that is presented to end-users of these networks should improve, and provide end-users with better information about the caller. It would also assist regulators and enforcement bodies in tackling nuisance calls.

In addition to the consultation on the revised CLI guidelines, we are also proposing to make a new number range available to be used when calls from CPs that are outside the scope of the CLI guidelines have absent or unreliable associated CLI. We expect calls originating in the UK to comply with the requirements set out in our CLI guidelines. However, there may be calls that originate from outside the UK which do not comply with these rules. In these situations, we would expect the CP at the point of ingress to the UK PSTN to substitute the network number with one from the proposed number range and mark the CLI as unavailable. The use of a number designated for this purpose from the proposed new number range would help our call tracing activities to quickly identify the CP who received the call at ingress to UK networks.

Contents

1. Summary

1.1   Calling Line Identification (CLI) provides information about the party making a telephone call. The CLI data that is presented with a call can provide assurance to the recipient of the call about to whom they are talking, and enable the recipient to make informed decisions about how to handle incoming calls. However, for this to work reliably, it requires that the CLI data presented to the call recipient is correct. This depends on the quality of the information that is provided by the originating CP and how the information is passed between different networks during the call set up.

1.2   The new General Conditions (GCs) require CPs, where technically feasible and economically viable, to provide Calling Line Identification facilities, ensuring that the CLI data provided with a call includes a valid, dialable telephone number which uniquely identifies the caller. In addition, as the CLI data can potentially identify the end user associated with that number, CPs also have to adhere to the Privacy and Electronic Communications Regulations 2003 (PECR), which gives end users the right to withhold their CLI to maintain their privacy. Therefore, CLI data refers to both the telephone number and the associated privacy marking indicating whether the number can be shared with the recipient of the call.

1.3   Most calls will pass through two or more network operators. To ensure that the CLI data is conveyed in a consistent way between different networks there needs to be a common understanding between CPs about the format of the information and how it is exchanged between networks.

1.4   The focus of the previous guidance was on the privacy requirements, in order to respect end users' privacy. It set out the principles so that privacy markings accompanying the CLI could be accurately passed between networks and that CLI data was only displayed where the end user has decided to make it available. However, in light of the new GC, we are proposing to update our CLI guidelines to provide more clarity over what we expect CPs to do to ensure that valid data is provided with a telephone call.

1.5   Furthermore, since the guidelines were last updated in 2007, developments in Voice over IP technology have made it easier to change the CLI data associated with a call. As end users rely on this information for assurance about who is calling them, the passage of CLI data is particularly vulnerable to misuse. Where CLI data is misused, it can lead to significant consumer harm. For example, the calling party can insert false CLI to intentionally mislead the recipient of the call. This is called spoofing. Therefore, CPs have a greater role to play to ensure, where possible, that accurate CLI data is presented to end users.

1.6   This consultation covers the changes we are proposing to make to our guidance to clarify what is expected of CPs. This document also sets out how these expectations differ, depending on the CP's role in a telephone call. The proposed guidance document is included in Annex 1 of this document.

1.7   We are proposing that CPs must only present CLIs to their end users where they judge the CLI data and associated markings as reliable. We also provide clarification about what is required to meet the requirements that the CLI provided is a valid, dialable number which uniquely identifies the caller. This will help to protect consumers by ensuring that the only CLIs that are displayed are ones that can be relied upon.

1.8   Some calls will involve CPs that are outside the scope of these guidelines, e.g. calls to or from CPs not in the UK. In this situation, there is currently an inconsistent approach between CPs, with some CPs inserting a random number from a range it holds. As CPs do not always indicate that a CLI has been inserted, it is not clear to the other CPs in the call chain that the CLI does not identify the originating network.

1.9   We are proposing to make a new number range available for allocation to CPs to be used as inserted Network Numbers in situations when a CP receives calls from CPs that are outside the scope of these guidelines and have absent or unreliable CLI. We are proposing that the 08979 number range is set aside for this purpose. Under this proposal, when a UK CP receives a call without a reliable Network Number, it would insert a number allocated to it from this range. Other CPs would recognise this number is from a range of numbers that are inserted in place of an unreliable or absent Network Number. This would help with call tracing activities as it would become easier to identify the network that has inserted the Network Number and this in turn would accelerate the call tracing process. It would also help CPs to meet the obligations proposed under our revised GCs, that the CLI data provided with a call contains valid and dialable numbers.

1.10   The revised CLI guidelines will come into force with the implementation of the new General Conditions, from 1 October 2018.

1.11   We invite stakeholders' views on these proposals. The deadline for responses is 14 November 2017.

2. Background, Legal Context and Scope

2.1   Calling Line Identification provides information about the party making a telephone call. Accurate CLI data can provide assurance about who is making that call. As the CLI data can identify an end user, end users also have the right to withhold their CLI to maintain their privacy.

2.2   CLI data consists of the caller's line identity along with a privacy marking, which indicates whether the number can be shared with the recipient of the call. The accuracy of CLI data needs to be protected throughout the transmission of a call and the privacy choices of end users respected and maintained throughout the call process, from the origination, during the transmission and to the termination of a call.

Legal Context

2.3   The rules for the display of CLI data are set out in the General Conditions of Entitlement (GCs), in GC C6.[1] This requires CPs, subject to technical feasibility and economic viability, to provide Calling Line Identification facilities. It also specifies that CPs must ensure that any CLI data provided with a call includes a valid, dialable telephone number which uniquely identifies the caller. Where CPs identify a call which has invalid or non-dialable CLI data, the GC requires the CP to prevent these calls from being connected to the called party, where technically feasible.

2.4   In providing this service, CPs must also comply with the Privacy and Electronic Communications (EC Directive) Regulations 2003 (PECR)[2], which set out a fundamental series of privacy rights for end users making and receiving calls, in particular, the right for any person to withhold their CLI to maintain their privacy. In 2016, Government amended PECR to require callers making or instigating direct marketing calls or making calls using automated calling systems to not withhold their CLIs.[3]

2.5   The GC requires CPs to inform their subscribers where CLI facilities are not available. We expect CPs to inform their customers at the start of their contract whether they are able to provide the functions of the CLI facilities and to update their customers where the situation changes.

2.6   The CLI guidelines are intended to set out the principles that should be followed to establish a common approach for voice services in the UK. Their aim is to help CPs provide the correct information with a telephone call and also to respect end users' privacy choices.

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[1] The revised General Conditions are available here:
https://www.ofcom.org.uk/__data/assets/pdf_file/0023/106394/Annex-14-Revised-clean-conditions.pdf
[2] http://www.legislation.gov.uk/uksi/2003/2426/contents/made, as amended. In particular, Regulations 10 – 13 set out the rights of users to withhold their CLI, and Regulations 19 and 21 prevent callers making marketing calls from withholding their CLI.
[3] http://www.legislation.gov.uk/uksi/2016/524/pdfs/uksi_20160524_en.pdf

2.7   The new GCs will replace the current GCs from 1 October 2018. Therefore, it is our intention that the new CLI guidelines will also come into force from this date.

Scope

2.8   The proposed new guidelines would apply to CPs who fall under the scope of the requirements of GC C6 and of PECR. Therefore, they would apply to all providers of Publicly Available Telephone Services and Public Electronic Communications Networks over which Publicly Available Telephone Services are provided.

2.9   Although CPs are required to comply with the GC for *Calling* Line Identification only, CPs must be mindful of the privacy requirements set out in PECR which would also relate to the Connected Line[4]. There may be situations where the recipient of a call may not wish to reveal information about their telephone number to the caller. Therefore, we would also expect CPs to follow the principles set out in the new guidelines for Connected Line (COL) information. However, unlike CLI, this is not mandated under our GCs.

2.10   These requirements apply to all calls, as it is not feasible to distinguish on a call-by-call basis whether a particular call involves a living individual and so has personal data associated to it. The only exception is in the case of direct marketing calls where, as already noted above, Government has amended PECR to prevent callers making direct marketing calls from withholding their CLI.

Impact Assessment

2.11   We consider the impact of our proposed changes in Section 4 and Section 5, alongside our explanation of the changes we are proposing to make.

Equality Impact Assessment

2.12   Ofcom is required by statute to assess the potential impact of all our functions, policies, projects and practices on the following equality groups: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion or belief and sexual orientation. Equality Impact Assessments (EIAs) also assist us in making sure that we are meeting our principal duty of furthering the interests of citizens and consumers regardless of their background or identity.

2.13   The proposals in the consultation seek to improve the quality of CLI information for all consumers. Therefore, we do not anticipate any particular group of society would be unfairly impacted by the changes we propose.

2.14   We have not carried out separate EIAs in relation to the additional equality groups in Northern Ireland: religious belief, political opinion and dependents. This is because we

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[4] The Connected Line Identity (COL) represents the information about the called party.

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anticipate that our proposals will not have a differential impact in Northern Ireland compared to consumers in general.

3. The evolving role of CLI

3.1   CLI data consists of the end user's line identity along with a privacy marking. There are two types of line identity: the Presentation Number and the Network Number. The Presentation Number is a number that is presented to the recipient of the call which can identify the caller, but may not necessarily identify the line identity of the geographic source of the call. The location of the source of the call is provided through the Network Number, which identifies the fixed access ingress to the telephone network.

3.2   The presence of a CLI can provide information about the caller to the recipient of the call. In addition, CLI data associated with a call from a fixed line gives emergency call handlers a way to identify the location of the caller making an emergency call. The emergency call handler can use the Network Number to identify the address that is registered with the line. As a result, callers can be located by the emergency services even where they are unable to state their location in the call. Therefore, it is important that the CLI data presented is accurate.

3.3   The move away from traditional PSTN technology has meant that the information provided in the CLI is not always as reliable as it used to be. This has caused problems both in terms of verifying the identity of the caller and providing the emergency services with accurate information about the calling party in emergency calls.

CLI Facilities

3.4   CLI facilities were first introduced in the UK in November 1994.[5] The introduction of this service meant that for the first time, recipients of a call could identify the number from which a call had been made. At that time, the CLI data provided alongside the call was reasonably reliable as this information could only be inserted into the call by a small number of trusted CPs and the information exchanged amongst this trusted circle.

3.5   Since then, the technology supporting voice calls has evolved, and fixed voice services can now be provided in different ways. Some of these involve using cheaper, packet-based technologies, such as Voice over IP (VoIP). The introduction of these technologies has meant that the responsibility for managing the CLI associated with the call has moved away from the small number of trusted CPs into a wider range of voice service providers and end users themselves.

3.6   This technology change has brought about some benefits. It is now much cheaper for businesses to make calls. Call centres that make calls on behalf of different businesses can insert an appropriate CLI for a specific call. Businesses that have employees in different physical locations can share CLI regardless of where the employees are based.

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http://webarchive.nationalarchives.gov.uk/20140107184007/http://www.ofcom.org.uk/static/archive/oftel/publications/1999/consumer/cli0499.htm

3.7   However, as Voice over IP has also made it cheaper to generate calls, it has resulted in an increase in the volume of unsolicited calls. Using VoIP, service providers (and some callers) can also manage the CLI data provided with a call, and therefore the CLI data that is provided may not be as accurate as it used to be, deliberately or otherwise.

3.8   This development can also be intentionally misused for malicious reasons, such as spoofing the identity of a caller to mislead the recipient of that call. The misuse of CLI could lead to significant harm for consumers, for example where scammers mislead the recipient of the call about their identity, in order to encourage the call recipient to provide them with sensitive information or money. Where the CLI data is misused or spoofed, consumers lose trust in the system and the CLI is no longer effective as an identifier about the source of the call. Without this trust, there is a greater risk of consumer harm, as consumers no longer have assurance about the identity of the caller.

3.9   Ofcom's review of consumer complaints about callers making silent and abandoned calls (among the types of nuisance calls that can be subject to specific Ofcom enforcement action) suggests that a significant portion of those callers spoof CLI in order to make it more difficult to identify them.[6] Ofcom uses a call tracing mechanism to identify wrongdoers, but spoofing means the process is more resource-intensive and time-consuming than necessary.

3.10   Therefore, more needs to be done to ensure that the CLI data that is displayed to the end user is correct and can be trusted. In the long run, as spoofing becomes easier, the presentation of the CLI data alone will no longer be sufficient to provide assurance to an end user about the identity of the party making that call. In recognition of this, there is ongoing work to improve the authentication of CLI data, such as the work of the Internet Engineering Task Force on the Secure Telephone Identity Revisited (STIR) standard.[7]

3.11   The STIR working group is developing the technical standards that will facilitate the verification of the calling party's authorisation to use a particular telephone number for an incoming call. NICC[8] are preparing a report on how STIR could be implemented in the UK. As there is still a significant amount of work to do before the standard can be implemented, it may take some time before a solution will be ready.[9] Once it is ready, we would expect CPs to implement this in their network, so that they can verify the CLIs used are valid and authentic on a call-by-call basis.

3.12   In the meantime, we would also encourage CPs to consider what additional assurance they could provide their customers about the identity of the caller, for example by only passing on CLIs that are valid numbers, and how this information could be communicated to their customers.

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[6] https://www.ofcom.org.uk/__data/assets/pdf_file/0017/96110/ICO-Ofcom-joint-action-plan-2016.pdf
[7] https://datatracker.ietf.org/wg/stir/charter/
[8] NICC is the UK telecoms industry standards forum that develops interoperability standards for UK communications networks.
[9] In the US, ATIS (the body that develops standards for the US ICT sector) has developed the SHAKEN framework to implement STIR in US networks. The US solution is currently in trial and they expect implementation to begin at the end of this year. It is possible that network scale deployment in the US may start by the end of 2018.

3.13   We seek comments from stakeholders about the introduction of CLI authentication, in particular on the viability and timeframe for implementation, as well as any issues associated with implementation.

CLI data and Caller Location

3.14   Beyond being just a source of information about the identity of the caller to the recipient of a telephone call, the Network Number plays a role as a reference for location information for emergency calls. GC A3 requires Publicly Available Telephone Service (PATS) providers, to the extent technically feasible, to make caller location information available to the emergency organisations handling 999 and 112 calls. This means that these CPs are required to keep an up to date list of their customer's location which can be referenced against a valid CLI. This is so that accurate location information can be provided to the emergency services to help them locate the person making the emergency call, particularly in situations where the caller is unable to inform the call handler of their location.

3.15   The move away from a traditional fixed voice service, configured against a specific customer line, means there is a risk of increasing error in location information. Without the correct CLI data, it is more difficult to identify the location of the caller. This could lead to delays in dispatching the emergency services in life critical situations. Therefore, it is critical that there is valid CLI data associated with a call.

> Question 1 – What are your views of the use of CLI authentication to improve the accuracy of CLI information presented to an end user, in particular the viability and timeframe for implementation? Are there any issues associated with implementation?

4. Changes to the Guidelines

4.1   As set out in the previous section, the presentation of a CLI alone is no longer sufficient to demonstrate reliable information about a caller. The electronic communications industry is considering technical developments which will aid authentication, but it is not yet technically feasible to provide additional information about the veracity of the data that is made available to consumers.

4.2   Nevertheless, CPs could be doing more to ensure that they are providing valid CLI data to consumers. We are updating the requirements in our General Conditions to require CPs to ensure that any CLI data provided includes a valid, dialable telephone number which uniquely identifies the caller.

4.3   The National Telephone Numbering Plan ('the Numbering Plan')[10] published by Ofcom sets out the telephone numbers available for allocation to CPs and restrictions and requirements in relation to their adoption and use. The National Numbering Scheme[11] provides a record of number block status, including a day-to-day record of numbers allocated to CPs.

4.4   We are proposing to update the guidelines to improve the reliability of the CLI data that is made available to end users. We have set out our proposed changes to these guidelines in two sections:

- The CLI principles; and
- Requirements for Network and Presentation Numbers.

4.5   Where appropriate, we have considered stakeholder feedback to our consultation on the GCs, to inform the proposed guidance and provide clarity where requested.

4.6   We are also proposing to make some other changes which copy across requirements that are already set out in ND 1016, the NICC standard for CLI display.

The CLI Principles: Validity, Privacy and integrity

4.7   The objective of the CLI facilities is to present information about the identity of a caller alongside a call. There are three fundamental principles to guaranteeing the reliability of the CLI data provided to end users in a telephone call: validity, privacy and integrity. The delivery of reliable CLI data to an end user relies on the CLI data being correct in the first place and containing the correct privacy markings and the co-operation of all the CPs involved in the chain to pass on this information correctly.

4.8   In response to our consultation on the changes to the GCs some stakeholders asked for clarification on the definition of identity and the role of CPs for the different requirements. We propose to explain in the guidance document that CLI data consists of a telephone

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[10] The Numbering Plan is published by Ofcom pursuant to section 56(1) of the Communications Act 2003, and amended from time to time. It is available on Ofcom's website:
https://www.ofcom.org.uk/__data/assets/pdf_file/0013/102613/national-numbering-plan-june-2017.pdf
[11] The National Numbering Scheme is available on our website: http://static.ofcom.org.uk/static/numbering/index.htm

number and an associated privacy marking. The presence of a reliable CLI gives the recipient of the call information about the caller and helps them to decide if they wish to answer that call.

Valid CLI

4.9   In our revised guidance we are proposing to clarify the responsibilities of different CPs in ensuring that the CLI data provided with a call contains valid information. We note that this responsibility first falls on the originating CP, to ensure that valid CLI data is provided with the call, as it is best placed to verify that the CLI generated for the call relates to the caller.

4.10   As the CLI guidance document sets out, we are proposing to define a valid CLI as one which complies with the format set out in the ITU-T numbering plan E.164[12] and is a dialable number. The previous CLI guidelines had already specified that a Network Number as a line identity that comprises of a unique E.164 number.

4.11   In addition to conforming with the format defined in E.164, a valid number is one which has been designated as available for use in the Numbering Plan and has been allocated by Ofcom (i.e. is shown as allocated in the National Numbering Scheme). Numbers that have not been allocated by Ofcom are not valid CLI.[13] We have modified the guidelines so that the number presented must not be a number that results in charges in excess of the cost of a standard telephone call to a geographic or a mobile number. This is so that consumers would not incur unexpected call charges when they make a return call using the CLI provided.

4.12   The transit and terminating CPs will be responsible for the integrity of the CLI that is provided with the call, so that the terminating CP can ensure that only valid CLI information is presented to the recipient of the call. We acknowledge that it is not currently technically feasible for CPs to verify that each and every individual CLI is valid and dialable on a call by call basis, but, pending more extensive capabilities, we would expect CPs to run at least basic checks, for instance to verify that the CLI has the correct number of digits and is in a suitable format. This should prevent obviously invalid CLI from being presented with a call.

4.13   CPs are required to keep an up to date list of their customers' locations for reference against a CLI to provide emergency caller location. Therefore, it is essential that the CP ensures that the CLI data generated is up to date. If an incorrect CLI is associated with a call, the location information could also be wrong. This affects the ability of the emergency services to locate the caller in situations where time is critical.

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[12] International Telecommunications Union (ITU) Recommendation E.164.

[13] GC17.2 states that "*The Communications Provider may only use a Telephone Number from Part A of the National Telephone Numbering Plan where that Telephone Number has been Allocated to a person, unless the use in question is for the purposes of indicating that the Telephone Number has not been Allocated*".

Dialable CLI that uniquely identifies the caller

4.14   The revised GC requires that the number that is provided is a dialable telephone number that uniquely identifies the caller. This means that the CLI presented to the recipient of the call should be a number which can be used to make a return or subsequent call, i.e. a number that is in service. We would also expect CPs, particularly the originating CP, to take reasonable steps to check that the caller has been given permission to use that CLI. As a result of this, it would be possible to identify the party using a CLI for call tracing purposes.

4.15   In the previous guidance document, CPs were already required to provide a Presentation Number that is dialable (or pass on unchanged a number provided by another CP) and to ensure that the number has been allocated to the caller or, if the number has been allocated to a third party, used with their permission. Therefore, the new requirement for CPs would be to verify that the caller has the permission to use the CLI in a call.

4.16   We would expect CPs to adopt a technical solution to demonstrate that the CLI is a valid, dialable number which the caller has permission to use when a suitable technical solution for authentication becomes available. This will provide the verification to all CPs involved in the call that the CLI that is provided and passed on represents the identity of the caller.

4.17   However, CLI authentication may not be ready for another few years. Until it is, we would expect CPs to consider if the number presented is sufficiently authentic. The steps that a transit or terminating CP could take may depend on a number of factors such as the number that is presented with the call or the source of the call. If the call comes from a reliable source and has a telephone number that appears to be authentic, then no further checks may be necessary. CPs may need to run further checks on the CLI where the call appears to come from a source that they should reasonably suspect to carry nuisance traffic. CPs could also demonstrate that only valid CLI data will pass between networks through a contractual agreement with its interconnect partners to guarantee that only valid, dialable CLI that uniquely identifies the caller is provided with any calls that are passed to their network.

Preventing calls with invalid or non-dialable CLI

4.18   Where a CP considers that the CLI provided with a call contains invalid or non-dialable CLI data, the GC requires the CP to prevent the calls from being connected to the called party, where technically feasible. In our revised guidance we propose that this could be by either blocking or filtering the calls. Blocking the calls at a network level would prevent the call from being connected to the recipient. Filtering the calls would divert them to a voicemail service. Both of these would result in the call not being immediately connected to the recipient. This would also allow for CPs to deploy different technical solutions, as not all voice networks are capable of being upgraded to provide the network blocking facility.

4.19   As we explain in our Statement on the changes to the General Conditions, this requirement is subject to technical feasibility, but not economic viability. Where it is not technically feasible to provide blocking, we would not require the CP to introduce it. However, there is

no economically viable qualifier as we expect CPs to comply with this requirement even though it may not be profitable for them to do so.

Privacy requirements

4.20   The privacy marking associated with a telephone number is considered a part of the CLI data. Therefore, the correct privacy marking must be provided and passed along with the number. We are proposing to clarify the situations when the different privacy markings must be used. The application of Available and Withheld markings remain unchanged. The Available marking must only be used where the caller has been given the option to withhold their CLI and chosen not to do so. Where the caller has chosen to restrict the display of their CLI, then the CLI should be marked as Withheld.

4.21   There is a third marking which should only be used under certain conditions. The Unavailable marking should be used to indicate where the CP has selected the marking. This could be for a number of reasons including where it is not possible to offer an end user privacy choices, where the display of the CLI has been prevented by the CP or where the CP has inserted a Network Number into the call as it has deemed the CLI data presented to be unreliable. This would then clearly differentiate between when the caller has selected to withhold their CLI or where the CP has selected to not make the CLI available for display.

4.22   If the originating CP is able to populate the CLI data with the correct privacy marking, the terminating CP will then be in a position to ensure that the only CLI data that is displayed to the end user is where the caller has chosen to make this information available.

Calls originating or terminating on a network outside the scope of these guidelines

4.23   Some calls will involve CPs that are outside the scope of these guidelines, e.g. calls to or from CPs not in the UK. Where a call has been generated on a network outside the scope of these guidelines, then the CP at the first point of ingress to the UK networks has the responsibility to ensure that the CLI data provided with the call contains valid information. Where they consider the CLI is not reliable, we are proposing that the CP should insert a CLI that has been allocated to them for this purpose. We are consulting on the appropriate number range in Section 5 of this document. In this situation, the privacy marking associated with the CLI should be marked as Unavailable, so that the CLI is not displayed to an end user. However, to protect against situations where the CLI may be displayed in error, calls to the number displayed should be routed to a non-chargeable explanatory announcement.

4.24   In order to protect the privacy wishes of callers, where the call is handed over to a network that is outside of the scope of these rules, the CP at the point of egress should only pass on CLI data where they reasonably trust that the privacy markings will be respected by CPs in the onward chain.

4.25   The previous version of the guidance document already sets out requirements for CPs where they receive calls from or route calls to networks which are not covered by the guidance. We are proposing to clarify these requirements and therefore do not expect CPs to incur significant costs to comply with the changes.

4.26   By clarifying these requirements, better CLI data should be available to end users on UK networks. It should also guarantee that their CLI data is handled correctly where the calls are made to networks outside the scope of these guidelines.

Use of end user's CLI information within a network

4.27   CPs have privileged access to a caller's CLI information so that they can route the call. The previous version of the guidelines set out the recommendations for CPs to distinguish the customer service functions from the functions that are essential to the provision of an electronic communications service, so that a customer's privacy rights can be respected within the network. We are proposing to retain this requirement in the revised document.

4.28   We propose to add a further requirement to remind CPs to respect the end users' privacy choices where their information may be passed to another party who is not a CP. If the end user has chosen to prevent the display of their number then their CLI data must only be passed on to another trusted CP.

Requirements for Network and Presentation Numbers

4.29   The previous guidance document defined two types of CLI: the Network Number and the Presentation Number. These definitions are used by CPs in their technical standard, establishing the common approach for the format of CLI data in the UK. These definitions have been retained and clarified.

4.30   We propose to clarify that a telephone call should always be accompanied by a Network Number, as a minimum. Although not stated explicitly in the past, this has been a part of our previous guidance as a Network Number is needed to identify the source of a call.

4.31   We also propose that the Network Number must always be one which has been provided by the originating network. As the role of the Network Number is to identify the location of the ingress of the call into the network, it is not appropriate for callers or other CPs to be able to modify this number.[14] Where the caller wishes to display different CLIs to the call recipient they are able to do so with the Presentation Number.

4.32   As a result of the changes that have been discussed in this section, CPs involved in a call with be responsible for ensuring that the Presentation Number has a valid, dialable CLI that uniquely identifies the caller. The originating CP will be responsible for ensuring that the CLI data provided with the call contains valid information. The transit and terminating CPs will be responsible for maintaining the integrity of the CLI that is provided with the call. The

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[14] Except in the case where the CP is the first point of ingress of the call to a UK network and there is no CLI provided with the call or that CP suspects that the CLI is unreliable.

terminating CP will be responsible for ensuring that only valid CLI information is presented to the recipient of the call.

4.33   For calls that originate on a network outside the scope of these guidelines, the CP at the first point of ingress will be responsible for providing an alternative number where they consider the CLI associated with a call unreliable, as explained in paragraph 4.23.

4.34   We are retaining the set of different scenarios where Presentation Numbers can be used to meet end user requirements. The list of the different types of Presentation Numbers have been developed to explain how that Presentation Number has been allocated and therefore the level of authenticity that is associated with that number. We think these descriptions will help CPs identify the situations where additional verification is necessary. We would be interested in stakeholders' views about any other types of Presentation Numbers that could be added to this list.

Other amendments

4.35   We propose to clarify the requirement that where a called end user has selected to use Anonymous Call Reject (ACR), to reject calls where the caller has chosen to prevent the display of their CLI, the calling end user should be advised as to why the call has not been connected. In our previous guidance, we suggested that a recorded voice message may be used to inform the caller of ACR. However, we propose to clarify and broaden this, so that the caller can be informed in different ways, including via a recorded message.

4.36   Previously this was exempt from being provided free of charge as CPs could offer CLI facilities for a fee. As GC C6 now requires CPs to provide CLI facilities without any additional charge, we also propose that this information should also now be provided free of charge (alongside the other requirements that arise from the PECR requirements).

Application of these rules

4.37   In recent years, technological developments have meant that publicly available voice services are now carried on a growing number of different network technologies. Mobile Network Operators (MNOs) provide Wi-Fi calling facilities via mobile handsets, so that customers are able to make calls on a Wi-Fi connection when they do not have coverage from a mobile network. Fixed network operators also provide similar functionality, so that fixed line customers can make and receive calls on their fixed line telephone number through a mobile app that is connected to a WiFi or mobile data service. There are also other technical solutions which extend mobile coverage, for example Multi-user Gateways.

4.38   In these situations, where the calls connect to a Publicly Available Telephone Service, these guidelines for CLI facilities would apply. Therefore, these calls should have the correct CLI data associated with them, including Network and Presentation Numbers, and also respect end users' privacy choices.

Impact of these changes

4.39   The revised guidelines set out clarification for CPs as to what is expected of them in implementing the requirements set out in the new GC. Much of this was in our previous CLI guidelines or is already part of the current industry standard ND 1016. As illustrated above, our clarifications are based on existing requirements. We have also provided further clarification of what is expected of CPs involved in the different stages of a telephone call, where the obligations on CPs have not changed.

4.40   In our consultation on the new GC we explained that these changes were proportionate as they go no further than is necessary to achieve the objectives of ensuring that all consumers benefit from the provision of services and facilities which enable them to identify the persons calling them.

4.41   If the recommendations in the guidance are implemented by all UK CPs, then the CLI data would be exchanged between different providers with greater accuracy and only valid CLI data would be made available to end users. This would improve the quality of the CLI data that is presented to end users using these networks.

> Question 2 – Do you have any comments on the proposed changes to the CLI guidelines?
>
> Question 3 – Are there any other types of Presentation Numbers which should be added to the list in Annex 1 of the CLI guidelines?

5. Proposal to designate a number range to be used as inserted Network Numbers for Calling Line Identification

Introduction

5.1   The GCs require CPs to ensure that any CLI data provided with and/or associated with a call includes a valid, dialable telephone number which uniquely identifies the caller. CPs must only present CLIs to their end users where they judge that the CLI data and associated privacy markings are reliable.

5.2   As explained in paragraph 4.23, some calls will involve CPs that are outside the scope of the UK's GC obligations or CLI guidelines, e.g. calls to or from CPs not in the UK. Where a call has been generated on a network outside the scope of the CLI guidelines, then the CP at the first point of ingress would be responsible for ensuring that the CLI data provided with the call contains valid information.

5.3   In this section, we explain our proposal to make a new number range available for allocation to CPs to use as 'inserted' Network Numbers in circumstances when the call involves CPs that are outside the scope of the CLI guidelines and the CLI is unreliable or absent.

The need for Ofcom to designate a number range as an inserted Network Number

5.4   NICC standard ND 1016 v 3.2.1 Section 6.5 sets out the responsibilities of networks that interconnect with networks not covered by the specification with respect to CLI. Rules are set out for calls to or from networks not covered, such as international calls.

5.5   When an inbound international call is routed to a UK network and the received Network Number is considered unreliable or is absent then, per the specification, the first known UK network should set the Network Number to a number from a range that it has been allocated.

5.6   The current industry practice is for the CP to insert a random number from a range that it has been allocated, often a geographic number. However, this practice is not consistently applied across CPs. Also, such practice does not indicate that the number has been 'inserted'. As a result, call tracing efforts can be delayed as a full trace could be required to determine where and by whom the Network Number has been inserted.

5.7   We consider that, rather than CPs using random numbers from their stock as inserted Network Numbers, it would be more effective for Ofcom to designate a range of numbers for allocation to CPs for this purpose. Under this proposal, when a UK CP receives a call

without a reliable Network Number, it would insert a number allocated to it from the designated range.

5.8   Digits in the number would identify the CP that had inserted the number in place of the absent/unreliable Network Number. This would simplify the call tracing process, as using numbers from a dedicated range would indicate clearly that:

- the Network Number had been inserted; and

- which UK network provider had inserted the number.

5.9   Initial call tracing inquiries could then be directed to the identifiable CP that inserted the Network Number, rather than all CPs that subsequently supported the call. Accelerating the call tracing process greatly improves the chances of identifying the originator of the call and taking any effective action necessary in relation to the call.

5.10   In addition, the proposal could help reduce the risk of consumer confusion. While inserted Network Numbers should be marked as Unavailable CLI and therefore should be withheld from the called party, in some instances, they might be displayed at termination. To cope with such cases, we support the suggestion in the NICC standard that UK CPs set up a free-to-caller explanatory announcement on their inserted Network Number(s) that would be heard if a call was made to the displayed Network Number.

Proposed characteristics of the number range to be used as 'Inserted Network Numbers'

5.11   We propose to designate the number range beginning with the digits 08979 as 'Inserted Network Numbers for Calling Line Identification' in the Numbering Plan. We have suggested this number range as we have already designated other number ranges beginning with 089 for Network Code purposes. Also, the digits 08979 are not close to numbers used for consumer-based services, which should limit the risk of misdials.

5.12   The 08979 numbers would be allocated to CPs following submission of an approved application form using our online Number Management System.[15] They would be allocated in blocks of 10,000, in the format 08979 XX 0000 – 9999, where XX would uniquely identify the CP allocated the numbers.

5.13   The proposal provides for 100 blocks of 10,000 numbers. We consider this to be sufficient to meet expected demand from CPs. In the event that more numbers are required, there is sufficient undesignated capacity in the remainder of the 0897X range for us to make available in the future, subject to consultation.

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[15] Ofcom's Number Management System (NMS) for online number applications is available at https://nms.ofcom.org.uk/NMS_ofcom/WEB-INF/xsa_logon.aspx. The system is password protected and CPs must register to use NMS to apply for blocks of number and manage their existing resource.

Designating the number range in the Numbering Plan

5.14   Ofcom administers the UK's telephone numbers. We do this as part of our regulation of the communications sector under the framework established by the Communications Act 2003 ('the Act'). It is our duty, as required by section 56 of the Act, to publish the Numbering Plan, setting out the telephone numbers available for allocation and any restrictions on how they may be adopted or used.

5.15   Our proposal to designate the 08979 number range as 'Inserted Network Numbers for Calling Line Identification' requires a modification to the Numbering Plan. Section 60 of the Act sets out the process that we must follow to do this, including that we must consult on the proposed modification and set out how the proposal complies with our legal tests and duties in the Act.

Legal tests and statutory duties

5.16   We consider that the changes we are proposing to make to the Numbering Plan meet the test set out in section 60(2) of the Act. Our proposed changes are:

   a) **objectively justifiable** because they are necessary to make a specific number range available for allocation to CPs to be use as inserted Network Numbers in situations when a CP receives calls from CPs that are outside the scope of these requirements and have absent or unreliable CLI. Designating a specific number range for this purpose would help with call tracing activities, making it easier to identify the network that has inserted the Network Number and accelerating the call tracing process. It would also help CPs to ensure that the CLI data provided with a call contains a valid and dialable number;

   b) **non-discriminatory** since the proposed changes would apply equally to all CPs;

   c) **proportionate** as the proposed changes would facilitate CPs to meet the obligations under our revised GCs and adhere to the CLI guidelines. They would not make any substantive change to the scope of regulation; and

   d) **transparent** as the reasons for the proposed changes are explained in this document.

5.17   We consider that our proposed modifications to the Numbering Plan are consistent with our principal duty under section 3 of the Act and the Community requirements set out in section 4 of the Act, particularly the third Community requirement to promote the interests of all persons who are citizens of the European Union. Designating a specific number range to be inserted by CPs in situations where they receive a call with an absent or unreliable CLI would further the interests of citizens in relation to communications matters as it would accelerate the call tracing process and would help to promote reliable CLI data.

5.18   We are satisfied that our proposal fulfils our general duty as to telephone numbering functions under section 63 of the Act by securing the best use of telephone numbers and encouraging efficiency and innovation for that purpose. The proposal meets a requirement for us to set aside a range of numbers to facilitate CPs in meeting their obligations under

our revised GCs and to follow the CLI guidelines in an effective manner that would further call tracing activities

5.19   A notification setting out our proposed amendments to the Numbering Plan is at Annex 2 of this document.

> Question 4 – Do you have any comments on the proposal to designate the 08979 number range as 'Inserted Network Numbers for Calling Line Identification' in the Numbering Plan?

A1. Revised CLI Guidelines

The revised CLI Guidelines on which we are consulting are published as a separate annex, available here: https://www.ofcom.org.uk/__data/assets/pdf_file/0021/106392/Annex-Draft-CLI-Guidelines.pdf

A2. Notification of proposed modifications to the provisions of the Numbering Plan under section 60(3) of the Communications Act 2003

A2.1   In accordance with section 60 of the Act, Ofcom proposes to modify the provisions of the Numbering Plan. The draft modifications to the Numbering Plan are set out in the Schedule to this Notification.

A2.2   Ofcom's reasons for making these proposals, and the effect of the proposed modifications, are set out in the accompanying consultation document.

A2.3   Ofcom considers that the proposed modifications comply with the requirements of section 60(2) of the Act.

A2.4   In making these proposals, Ofcom has considered and acted in accordance with their general duty as to telephone numbering functions under section 63 of the Act, their general duties under section 3 of the Act and the six Community requirements set out in section 4 of the Act.

A2.5   Representations may be made to Ofcom about the proposed modifications until **5pm on 14 November 2017**.

A2.6   If implemented the modifications shall enter into force on a date to be specified in Ofcom's final statement in relation to these proposals.

A2.7   In this Notification:

a) "**the Act**" means the Communications Act 2003;

b) "**Ofcom**" means the Office of Communications; and

c) "**Numbering Plan**" means the National Telephone Numbering Plan published by Ofcom pursuant to section 56(1) of the Act, and amended from time to time.

A2.8   Words or expressions shall have the meaning assigned to them in this Notification, and otherwise any word or expression shall have the same meaning as it has in the Act.

A2.9   For the purposes of interpreting this Notification: (i) headings and titles shall be disregarded; and (ii) the Interpretation Act 1978 shall apply as if this Notification were an Act of Parliament.

A2.10   The Schedules to this Notification shall form part of this Notification.

Brian Potterill

Competition Policy Director

A person authorised by Ofcom under paragraph 18 of the Schedule to the Office of Communications Act 2002.

19 September 2017

SCHEDULE

It is proposed to insert the text marked in bold in the Section 'Other Network Codes' in Part A3: Network Codes of the Numbering Plan.

A3: Network Codes	
Number(s)	Designation
Other Network Codes	
001 - 999 Public Communications Provider Identity (inclusive) 000 – 999 Switch Number (inclusive)	3-digit plus 3-digit Partial Calling Line Identity Codes
7000 to 7089 inclusive	4-digit Targeted Transit Codes
8000 to 8889 inclusive and 8900 to 8999 inclusive	4-digit Carrier Pre-Selection Codes
08979	**10-digit Inserted Network Numbers for Calling Line Identification**
089930 to 089999 inclusive	10-digit Inbound Routing Codes
4-digit numbers	X25 Data Network Identification Codes

A3. Responding to this consultation

How to respond

A3.1   Ofcom would like to receive views and comments on the issues raised in this document, by 5pm on 14 November 2017.

A3.2   We strongly prefer to receive responses via the online form at https://www.ofcom.org.uk/consultations-and-statements/category-2/guidelines-for-cli-facilities. We also provide a cover sheet (https://www.ofcom.org.uk/consultations-and-statements/consultation-response-coversheet) for responses sent by email or post; please fill this in, as it helps us to maintain your confidentiality, and speeds up our work You do not need to do this if you respond using the online form.

A3.3   If your response is a large file, or has supporting charts, tables or other data, please email it to CLIGuidelines@ofcom.org.uk as an attachment in Microsoft Word format, together with the cover sheet (https://www.ofcom.org.uk/consultations-and-statements/consultation-response-coversheet). This email address is for this consultation only, and will not be valid after December 2017.

A3.4   Responses may alternatively be posted to the address below, marked with the title of the consultation:

Jill Faure
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

A3.5   If you would like to submit your response in an alternative format (e.g. a video or audio file), please contact Jill Faure on 020 7783 4878, or email Jill.Faure@ofcom.org.uk.

A3.6   We do not need a paper copy of your response as well as an electronic version. We will acknowledge receipt if your response is submitted via the online web form, but not otherwise.

A3.7   You do not have to answer all the questions in the consultation if you do not have a view; a short response on just one point is fine. We also welcome joint responses.

A3.8   It would be helpful if your response could include direct answers to the questions asked in the consultation document. The questions are listed at Annex 6. It would also help if you could explain why you hold your views, and what you think the effect of Ofcom's proposals would be.

A3.9   If you want to discuss the issues and questions raised in this consultation, please contact Jill Faure on 020 7783 4878, or by email to Jill.Faure@ofcom.org.uk.

Confidentiality

A3.10   Consultations are more effective if we publish the responses before the consultation period closes. In particular, this can help people and organisations with limited resources or familiarity with the issues to respond in a more informed way. So, in the interests of transparency and good regulatory practice, and because we believe it is important that everyone who is interested in an issue can see other respondents' views, we usually publish all responses on our website, www.ofcom.org.uk, as soon as we receive them.

A3.11   If you think your response should be kept confidential, please specify which part(s) this applies to, and explain why. Please send any confidential sections as a separate annex. If you want your name, address, other contact details or job title to remain confidential, please provide them only in the cover sheet, so that we don't have to edit your response.

A3.12   If someone asks us to keep part or all of a response confidential, we will treat this request seriously and try to respect it. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A3.13   Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's intellectual property rights are explained further at https://www.ofcom.org.uk/about-ofcom/website/terms-of-use.

Next steps

A3.14   Following this consultation period, Ofcom plans to publish a statement in early 2018.

A3.15   If you wish, you can register to receive mail updates alerting you to new Ofcom publications; for more details please see https://www.ofcom.org.uk/about-ofcom/latest/email-updates

Ofcom's consultation processes

A3.16   Ofcom aims to make responding to a consultation as easy as possible. For more information, please see our consultation principles in Annex 4.

A3.17   If you have any comments or suggestions on how we manage our consultations, please email us at consult@ofcom.org.uk. We particularly welcome ideas on how Ofcom could more effectively seek the views of groups or individuals, such as small businesses and residential consumers, who are less likely to give their opinions through a formal consultation.

A3.18   If you would like to discuss these issues, or Ofcom's consultation processes more generally, please contact Steve Gettings, Ofcom's consultation champion:

Steve Gettings

Ofcom

Riverside House

2a Southwark Bridge Road

London SE1 9HA

Email: corporationsecretary@ofcom.org.uk

A4. Ofcom's consultation principles

Ofcom has seven principles that it follows for every public written consultation:

Before the consultation

A4.1   Wherever possible, we will hold informal talks with people and organisations before announcing a big consultation, to find out whether we are thinking along the right lines. If we do not have enough time to do this, we will hold an open meeting to explain our proposals, shortly after announcing the consultation.

During the consultation

A4.2   We will be clear about whom we are consulting, why, on what questions and for how long.

A4.3   We will make the consultation document as short and simple as possible, with a summary of no more than two pages. We will try to make it as easy as possible for people to give us a written response. If the consultation is complicated, we may provide a short Plain English / Cymraeg Clir guide, to help smaller organisations or individuals who would not otherwise be able to spare the time to share their views.

A4.4   We will consult for up to ten weeks, depending on the potential impact of our proposals.

A4.5   A person within Ofcom will be in charge of making sure we follow our own guidelines and aim to reach the largest possible number of people and organisations who may be interested in the outcome of our decisions. Ofcom's Consultation Champion is the main person to contact if you have views on the way we run our consultations.

A4.6   If we are not able to follow any of these seven principles, we will explain why.

After the consultation

A4.7   We think it is important that everyone who is interested in an issue can see other people's views, so we usually publish all the responses on our website as soon as we receive them. After the consultation we will make our decisions and publish a statement explaining what we are going to do, and why, showing how respondents' views helped to shape these decisions.

A5. Consultation coversheet

BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing   ☐

Name/contact details/job title   ☐

Whole response   ☐

Organisation   ☐

Part of the response   ☐

If there is no separate annex, which parts?   _____

_____

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name   Signed (if hard copy)

A6. Consultation questions

A6.1   We welcome your views on the proposed changes to the requirements for CLI data

> Question 1 – What are your views of the use of CLI authentication to improve the accuracy of CLI information presented to an end user, in particular the viability and timeframe for implementation? Are there any issues associated with implementation?
>
> Question 2 – Do you have any comments on the proposed changes to the CLI guidelines?
>
> Question 3 – Are there any other types of Presentation Numbers which could be added to the list in Annex 1 of the CLI guidelines?
>
> Question 4 – Do you have any comments on the proposal to designate the 08979 number range as 'Inserted Network Numbers for Calling Line Identification' in the Numbering Plan?