

Consultation response form

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Consultation title	Consultation: Global Titles and Mobile Network Security
Full name	[REDACTED]
Contact phone number	[REDACTED]
Representing (delete as appropriate)	Organisation
Organisation name	Cubic Telecom Limited
Email address	[REDACTED]

Confidentiality

We ask for your contact details along with your response so that we can engage with you on this consultation. For further information about how Ofcom handles your personal information and your corresponding rights, see [Ofcom's General Privacy Statement](#).

Your details: We will keep your contact number and email address confidential. Is there anything else you want to keep confidential? Delete as appropriate.	Nothing
Your response: Please indicate how much of your response you want to keep confidential. Delete as appropriate.	The included Appendix is confidential in nature
For confidential responses, can Ofcom publish a reference to the contents of your response?	Yes

Your response

Question	Your response
<p>Question 1: Do you agree with our proposal to ban GT leasing to third parties? If not, please explain your reasons including how you would prevent malicious signalling by lessees.</p>	<p>Confidential? – N</p> <p>Cubic Telecom is an Irish headquartered provider of global connected software solutions and analytics services to clients in the Automotive, Agriculture, and Transportation sectors. Delivering advanced software-defined connected vehicle solutions in over 190 countries and regions around the world. Working with the world’s leading automotive, transportation and agriculture OEMs, we connect over 20 million cars and vehicles globally.</p> <p>To compete globally, OEMs must manage the complexities of connecting with different technologies while complying with regulatory mandates in different countries. Cubic Telecom cuts through this complexity through agreements with more than 90 MNOs, providing a single, global solution that enables any vehicle shipped anywhere in the world to have fully compliant built-in connectivity regardless of local market requirements.</p> <p>Global Title Leasing (via an arrangement with BT) is one of the tools used by Cubic Telecom to deliver services to its customers (Use Cases are described in subsequent question responses).</p> <p>In the main, Cubic supports the proposal by Ofcom to restrict and limit the use of Global Title Leasing. We are all too aware of the harm that can be caused when bad actors exploit vulnerabilities inherent to global titles. As such we do understand and appreciate the need for Ofcom to introduce a ban on GT Leasing.</p> <p>However, as Ofcom will be aware, Global Titles are an essential part of the modern communications ecosystem, providing the addresses used to route signalling for SS7 networks.</p> <p>When the GSM Association attempted to tackle the issues associated with GT Leasing by producing the GT Leasing Code of Conduct “CoC”, the decision was made that certain well defined use cases are out of scope of the CoC to avoid unexpected damaging service consequences for consumers (e.g. losing roaming services). The NSCS statement provided to Ofcom also points out</p>

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	<p>that “a small number of +44 Global Titles seem to be responsible for a disproportionate volume of malicious SS7 traffic”. In addition, according to paragraph 3.18 of the consultation, only 40% of malicious signalling identified in the Enea Report appears to originate from GT Leasing arrangements.</p> <p>The CoC approach put forward by the GSMA and members companies did not have the desired effect of deterring or preventing bad actors from taking advantage of the vulnerabilities associated with GT Leasing. However, it is also clear that GT Leasing does not represent the main source of malicious signalling. Paragraph 3.18 of the Ofcom Consultation suggests that 40% of malicious signalling arises from GT Leasing and paragraph 3.24 provides that “a small number of +44 Global Titles seem to be responsible for a disproportionate volume of malicious SS7 traffic”.</p> <p>The rationale for imposing such a ban is clear however we would disagree that the blanket nature of the ban.</p> <p>All use cases are not equal and the manner in which the proportionality test was applied would appear to suggest that this is the case. Clearly the use of GT leasing for the purpose of supporting Emergency Calls (eCall) to a closed user group is not analogous to A2P SMS. The GT Leasing ban is likely to result in eCall impact for a number of providers of connectivity services to Automotive OEMs in the UK. It is also the case that all lessors and lessee are not equal.</p> <p>Cubic Telecom is advocating for the following:</p> <ol style="list-style-type: none"> (1) A longer transition period, until 1 January 2028, for existing arrangements where the GT Leasing arrangement has not prior history of malicious signalling (with a ban to apply for new arrangements); and (2) A complete derogation for certain use cases which (a) are pre-existing (b) meet the requirements in the Good Practice Guide (c) have no history of associated malicious signalling AND (d) are providing services which by their nature are critical.

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<p>Question 2: Do you agree with our proposal to only include exemptions to our ban on GT leasing re-lating to intra-group and supplier use? If you consider that any other exemptions are necessary, please explain how these exemptions could be limited to prevent malicious signalling by lessees.</p>	<p>Confidential? – Y (the Appendix is confidential)</p> <p>Cubic Telecom is of the view that other exemptions should apply. The GSMA CoC considered the following use cases as out of scope:</p> <ol style="list-style-type: none"> 1. Hosted services; and 2. Use of GTs by roaming enabling services as defined in PRDs BA.21 and BA.23. <p>It is noted that these Use Cases are now within the scope of the GT Leasing prohibition proposed by Ofcom.</p> <p>As a Mobile virtual network operator (MVNO), Cubic Telecom is particularly focussed on use cases for MVNOs using their own core network equipment whereby GTs are used to send SS7 signalling messages between the core network equipment and the host network.</p> <p>The following are the use cases operated by Cubic by means of GT Leasing (the diagrams in the Appendix provide further details of same):</p> <ol style="list-style-type: none"> (1) GSM Location Update– Cubic devices using the BT IMSI use BT GTs to attach (updateLocation). These are translated by BT to Cubic GTs and the signalling is forwarded to Cubic. (2) GPRS Update Location– Cubic devices using the BT IMSI use BT GTs to attach (updateGprsLocation). These are translated by BT to Cubic GTs and the signalling is forwarded to Cubic. (3) CS Speech MT – Provide Roaming Number is sent from Cubic HLR towards BT or BT roaming partner VLR with a BT GT as the SCCP calling party. Used by the customer for eCall Callback. (4) SMS MO – MO SMS Messages use a BT/EE Global Title as an SMSC number. This SMSC number is translated by BT to a Cubic Global Title and forwarded to Cubic. Used by for shoulder tap (wakeup) SMS on the in-car device where it has been offline. <p>It should be noted that for a number the SMS use case Cubic Telecom has additionally implemented closed user group requirements meaning that SMS is only capable of being used to interact with the in-car device.</p>

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	<p>The GT Leasing being used for voice purposes allows for the routing of calls to the vehicle from the Public Safety Answering Point (PSAP), being the call center or dispatch center that handles emergency calls and coordinates emergency responses. It may be necessary for the PSAP to return a call to the vehicle. The leased GT is used to provide a signal to the visited network. This use case is restricted to using BT IMSI for voice, so the visited network should be limited to BT , (namely SURE in Guernsey and Jersey Telecom in Jersey) which significantly reduces the risk of malicious activities.</p>
<p>Question 3: Do you agree with our proposal to ban the creation of GTs from sub-allocated numbers by third parties?</p>	<p>Confidential? – N</p> <p>Yes, Cubic Telecom we believe that there is a more inherent risk associated with such practice given the lack of direct relation with the owner of the numbering resources (limited due diligence capability) and as such a ban on the creation of GTs from sub-allocated numbers by third parties makes sense to Cubic Telecom.</p>
<p>Question 4: Do you agree with our proposals to strengthen our rules to prohibit the misuse of GTs by operators that hold UK mobile numbers and to provide supplementary guidance on the types of steps range holders are expected to take when providing a service to a customer (using a GT as an input) that has the potential to generate malicious signalling?</p>	<p>Confidential? – N</p> <p>Whilst this particular matter does not impact on Cubic Telecom, the suggested approach makes sense as a whole. We note that from paragraph 3.18 of the Ofcom Consultation that at least 30% of malicious signalling would appear to be originating from numbering range holders themselves. The exact figure could in fact be higher. The approach adopted to address such misuse of GTs is in our view more measured than the proposed outright ban on GT Leasing. Considering that each source of Global Titles are accounting for similar levels of malicious signalling it feels that a more measured approach could also be adopted in respect of GT Leasing, in particular where pre-existing arrangements exist that have not been identified as a source of malicious signalling.</p>
<p>Question 5: Do you agree with our proposal to strengthen our rules to prohibit the creation of GTs from numbers not allocated for use?</p>	<p>Confidential? – N</p> <p>Whilst we would question the jurisdictional challenges associated with the proposed ban, we feel that it is imperative that this area is tackled to avoid the overall negative perception about Global Title leasing and therefore support such an intervention.</p>

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<p>Question 6: Do you agree with the proposed implementation period?</p>	<p>Confidential? – N</p> <p>Cubic Telecom is advocating for the following:</p> <p>(1) A longer transition period, until 1 January 2028, for existing arrangements where the GT Leasing arrangement has no prior history of malicious signalling (with a ban to apply for new arrangements); and</p> <p>(2) A complete derogation for certain use cases which (a) meet the requirements in the Good Practice Guide (b) have no history of associated malicious signalling AND (c) are providing services which by their nature are critical. At a minimum an extended transition period should be provided in respect of the use cases in question.</p>
<p>Question 7: Do you agree with our provisional impact assessment?</p>	<p>Confidential? – N</p> <p>As stated above, Cubic Telecom is of the view that the provisional impact assessment treats all use cases the same when in fact they are very different. The NSCS statement cited by Ofcom clearly calls out that a small number of +44 Global Titles seem to be responsible for a malicious signalling. The GSMA had excluded certain use cases from its CoC.</p> <p>The Ofcom consultation provides that it has not included specific exemptions for use cases due as “the exemptions are likely to be difficult to monitor and may create a risk that bad actors are able to access GTs for uses beyond the stated exemptions”.</p> <p>A staged approach to GT Leasing restrictions would have proven this to be the case. However, the approach adopted by Ofcom is to implement a ban as opposed to a staged intervention with monitoring and stronger enforcement powers.</p> <p>Whilst difficult to apply to all use cases, there are certain use cases that would, in the view of Cubic Telecom, not merit an outright ban when carrying out the assessment, not least the use of GT Leasing for emergency call purposes.</p>
<p>Question 8: Do you agree with our proposed changes to the General Conditions of Entitlement, National</p>	<p>Confidential? – N</p>

Question	Your response
Telephone Numbering Plan and Numbering Condition Binding Non-Providers?	Cubic Telecom was always of the view that the guidance in the Good Practice Guide would apply to GT leasing and is of the view that proper monitoring and imposition of these rules would reduce the risk of misuse of GTs. Cubic Telecom considers that where the existing Good Practice Guide was followed correctly then the Guide was sufficient in its current form to address the harms from the creation and misuse of GTs however, we have no inherent objection to strengthening the rules in the Good Practice Guide.

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