

XConnect's response to Ofcom's consultation (22nd July 2024): Global Titles and Mobile Network Security - Proposals to address misuse of Global Titles

XConnect welcomes the opportunity to respond to Ofcom's consultation. We fully support Ofcom's objective of promoting network security and protection against malicious signalling.

Introduction to XConnect

XConnect¹ provides a trusted global registry of network and subscriber information, based on privacy compliant phone number data, including global number portability, global number ranges and prefixes and mobile phone subscriber status.

Established in the UK in 2005, XConnect delivers mission critical carrier-grade numbering information services to over 200 operators globally, including MNOs, business messaging (A2P) hubs, aggregators, carriers, interconnect providers and enterprises. XConnect annually processes over 50bn queries per year and is an ISO 27001 certified company. Our number information services are used for voice and message routing, fraud protection, phone number validation as well as fraud mitigation and risk scoring. XConnect also supports the deployment and evolution of next-generation communications, such as VoLTE² and RCS³. Our Number Information Services⁴ are accessed through our global distributed hybrid cloud platform using simple, secure, scalable real-time protocols and APIs.

In 2020, XConnect was acquired by Somos, Inc., a USA-based company providing number information and services to over 1,400 organisations and is the trusted USA telecom sector administrator for over 3 billion numbers throughout the USA and North America. Somos helps to enable seamless communications between enterprises and consumers through the management of the USA regulatory agency's ("FCC") mandated databases including North American Numbering Plan ("NANP"), Toll-Free Number Administrator ("TFNA") and the Reassigned Numbers Database ("RND"). In addition, Somos administers the USA's largest Do Not Originate ("DNO") list.

¹About XConnect: <https://www.xconnect.net/about-xconnect/>

²VoLTE - Voice over Long-Term Evolution (VoLTE) is a LTE high-speed wireless communication standard for mobile phones and data terminals

³RCS - Rich Communication Services protocol is designed as a modern take on texting that rolls features from Facebook Messenger, iMessage, and WhatsApp into one platform

⁴About XConnect Number Information Services: <https://www.xconnect.net/services>

Responses to Ofcom Questions

Ofcom 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.

Whilst XConnect believe that there are some legitimate use cases for GT leasing, the evidence of harm to UK and international citizens is extremely compelling. Additionally, UK numbers do not have a good reputation globally and have long featured in cases of International Revenue Share Fraud as well as attacks resulting from GT leasing. XConnect often receives queries from customers about the UK numbering plan as the result of operational issues being experienced and typically these queries either relate to the Crown Dependencies or more obscure parts of the UK numbering plan, e.g. ranges not assigned to major operators or unallocated ranges.

XConnect fully supports Ofcom's statement in paragraph 4.61 and believe a ban will support these goals, subject to the challenges related to unallocated numbers referenced in our answer to question 5 below.

The mobile industry has taken steps through the GSMA Code of Conduct ("CoC") however, at the time of writing this response, there are no signatories to the CoC and only two supporters globally. Given the Code of Conduct was announced almost two years ago and has been in force for almost a year, it is reasonable to conclude that the CoC is not effective and will not be effective in preventing the abuse this consultation highlights.

XConnect believes the key to addressing the risks raised by GT leasing is ensuring that GT lessors are accountable and responsible for the traffic that use their GTs. Where "Routeing, via the lessor" mechanism is implemented (as described in the CoC), the potential harm can be monitored, controlled and potentially mitigated by the GT lessor. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Ofcom Question 2

Do you agree with our proposal to only include exemptions to our ban on GT leasing relating 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.

XConnect supports the exemption for intra-group and supplier use as this reflects a legitimate use cases offered today. However, we believe that other use cases should also be permitted:

[REDACTED]

2. Authentication Services / Least cost Routing / Number Authentication, as listed in Table 4.1, XConnect agrees that the alternatives listed are realistic theoretically, however, our experience is that these services are not widely available and are not scalable.

HLR queries, today, are widely used for legitimate services such as number validation, number portability resolution (where no central database is available such as the UK, Hong Kong, Israel or where non-domestic access is prohibited). There will be consumer harm by removing access to these services in the absence of alternatives being available and scalable at a global level. XConnect believes the risk can be mitigated by the lessor removing extraneous information from the signalling and providing the minimum information required to confirm that:

- i. a number has been ported or not
- ii. the number is "live" and
- iii. the IMSI is replaced with a unique token so that changes in IMSI can be identified without revealing the underlying IMSI which is already common practice where SMS Home Routing has been deployed.

Absent any support of this capability, we would envisage potential consumer harm. The XConnect query services support billions of queries each month to enable accurate routing of voice calls and SMS messages. A proportion of these services use HLR queries and some of these are currently dependent upon leased GTs (albeit in a highly controlled and supervised manner). The absence of this routing information will result in such traffic not being accurately delivered.

Ofcom Question 3

Do you agree with our proposal to ban the creation of GTs from sub-allocated numbers by third parties?

XConnect fully supports the ban on sub-allocation. The decision to create a GT should be made solely by the party that applied for the range from Ofcom. The CP allocated the GT are accountable for the declarations made at the time the number range was requested and are responsible for complying with all relevant rules and regulations. Any party that requires a GT should apply to Ofcom directly.

Ofcom Question 4

***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?*

XConnect supports this proposal to strengthen the rules.

Ofcom Question 5

Do you agree with our proposal to strengthen our rules to prohibit the creation of GTs from numbers not allocated for use?

XConnect supports this proposal, particularly in combination with the statement in 5.46 for maintaining a list of providers and/or GTs that may be shared with the GSMA for inclusion in their Roaming Gateway (albeit they might not be able or willing to support that).

[REDACTED]

Ofcom Question 6

Do you agree with our proposal to strengthen our rules to prohibit the creation of GTs from numbers not allocated for use?

XConnect fully supports this proposal, noting the concerns raised in our answer to question 2.

Ofcom Question 7

Do you agree with our provisional impact assessment?

XConnect supports the provisional impact assessment with the following caveats:

1. XConnect do not agree with paragraph 4.68. XConnect do not believe this reflects the reality at a global level or where +44 GTs are used for legitimate use cases and not exclusively to access UK networks. We referenced this in more detail in our response to question 2 above.

[Redacted content]

Ofcom Question 8

Do you agree with our proposed changes to the General Conditions of Entitlement, National Telephone Numbering Plan and Numbering Condition Binding Non-Providers?

XConnect supports the requirement for the necessary changes to the General Conditions.