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**AT&T Comments on BNetzA's Consultation on the Extra-territorial Use of Telephone Numbers as Part of Machine-to-Machine Communication**

AT&T is pleased to provide the following comments on BNetzA's *Consultation on the Extra-Territorial Use of Telephone Numbers as Part of Machine-to-Machine Communication* and the associated documents and decisions published for consultation in Official Gazette Notice No. 1285/2016 dated 12 October 2016. AT&T had provided comments on BNetzA's earlier related *Numbering Plan for International Mobile Subscriber Identity (IMSI) Codes* published in Official Gazette Notice No. 982/2015 dated 26 August 2015, and *Consultation Regarding a Future Numbering Plan for International Mobile Subscriber Identity (IMSI)* published in Official Gazette Notice No. 819/2014 dated 20 August 2014.

**I. BNetzA's Proposal to Allow Extra-territorial Use of E.164 Numbers will Facilitate Innovation in the Internet of Things**

AT&T welcomes BNetzA's intention to further liberalize Germany's Numbering Plan for Mobile Services with the intention to allow the extra-territorial use of telephone numbers (i.e., E.164 numbers) for machine-to-machine (M2M) communications. Expressly and unambiguously permitting the use of foreign numbers in Germany for M2M applications, as well as the use of German numbers outside the country, expands the potential opportunities for broad and innovative solutions to the benefit of industry, consumers and society. Indeed, BNetzA's thoughtful action recognizes and capitalizes on the global nature of the Internet of Things, or IoT, of which M2M communications plays a significant role.

AT&T notes that BNetzA's proposal to explicitly permit foreign telephone numbers that are either permanently installed in a telecommunications network in Germany or are used by way of permanent roaming<sup>1</sup> comports with general regional thinking on the matter. For example, the Body of European Regulators for Electronic Communications (BEREC), after extensive study and industry consultation, issued a report of recommendations, *Enabling the Internet of Things*.<sup>2</sup> BEREC identifies telephone numbers and IP addresses as an essential resource for enabling the IoT and concludes that the extra-territorial use of numbers is a reasonable approach for M2M service deployment.<sup>3</sup> BNetzA's proposal also brings

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<sup>1</sup> Draft decision *Extra-territorial use of foreign telephone numbers in the territory of the Federal Republic of Germany within the framework of machine-to-machine communication*. See [http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen\\_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf\\_Vfg\\_ExterritorialeNutzung.pdf;jsessionid=B3A309244E321303C5CDCB48E1F7361B?\\_\\_blob=publicationFile&v=2](http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf_Vfg_ExterritorialeNutzung.pdf;jsessionid=B3A309244E321303C5CDCB48E1F7361B?__blob=publicationFile&v=2) at 2.2.

<sup>2</sup> *BEREC Report on Enabling the Internet of Things*, Report BoR 16(39), 12 February 2016 at [http://berec.europa.eu/eng/document\\_register/subject\\_matter/berec/reports/5755-berec-report-on-enabling-the-internet-of-things](http://berec.europa.eu/eng/document_register/subject_matter/berec/reports/5755-berec-report-on-enabling-the-internet-of-things)

<sup>3</sup> *Ibid*, at p. 17.

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continuity to its oversight of numbering resources by aligning the agency's usage policies for foreign telephone numbers and foreign IMSIs.

## II. BNetzA's Proposed Notification Requirements for Extra-territorial Use of E.164 Numbers are Unnecessary

In contrast to the recently published administrative order on the extra-territorial use of IMSIs,<sup>4</sup> BNetzA proposes to make the extra-territorial use of telephone numbers subject to notification requirements, primarily due to public safety considerations.<sup>5</sup> AT&T argues below that such public safety considerations are quite distinguishable for M2M services from traditional telephony services, and that for the same reasons why BNetzA did not require notification of extra-territorial use of IMSIs used for M2M services, a notification requirement for foreign telephone numbers is also not necessary.

First, BNetzA does not require a separate and specific notification to be filed with the regulator for the extra-territorial use of IMSIs for M2M applications. Reconsidering its earlier thinking,<sup>6</sup> BNetzA said that based on industry feedback, such a notification requirement would be too complex and could have a deterrent effect, and therefore would thwart innovation in the area of IoT and M2M services. In its final analysis, BNetzA determined that a streamlined approach to the extra-territorial use of IMSIs would best facilitate Germany's growth objectives for M2M communications. AT&T respectfully requests BNetzA to apply this same logic to the extra-territorial use of foreign telephone numbers in Germany, noting differences in the role of telephone numbers in the provision of M2M services versus traditional communication services.

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<sup>4</sup> Order No. 33/2016, of 15 June 2016, *Extra-Territorial Use of Foreign International Mobile Subscriber Identities (IMSIs) in the Federal Republic of Germany for machine-to-machine communications*, at [http://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/BNetzA/Areas/Telecommunications/NumberManagement/TechnicalNumbers/IMSI\\_Extra-territorial.pdf?\\_\\_blob=publicationFile&v=1](http://www.bundesnetzagentur.de/SharedDocs/Downloads/EN/BNetzA/Areas/Telecommunications/NumberManagement/TechnicalNumbers/IMSI_Extra-territorial.pdf?__blob=publicationFile&v=1)

<sup>5</sup> "An important difference is that in the case of use of foreign numbers in Germany as well as use of German numbers for mobile services outside of Germany a notification obligation is proposed, which was not established with respect to IMSIs. In the case of numbers, such a notification obligation is required, however, for reasons of public safety. This applies in particular for the obligation to maintain a customer data base (Sec. 111 TKG) and the provision of information resulting therefrom (Secs. 112 seq. TKG) for any telecommunications services existing on the German market." See Notice No. 1285/2016, Official Gazette No. 19 of 12.10.2016, *Hearing on the Extra-territorial Usage of Numbers in Connection with Machine-to-Machine Communication* at [http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen\\_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Anhoerungsmittlung.pdf?\\_\\_blob=publicationFile&v=1](http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Anhoerungsmittlung.pdf?__blob=publicationFile&v=1)

<sup>6</sup> "BNetzA initially considered a notification requirement in the context of public safety, capacity planning relative to number management and clarity into the use of German IMSI numbers used abroad but determined that none of these objectives superseded the need for a streamlined approach to the extra-territorial use of IMSIs for M2M applications." See [http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen\\_Institutionen/Nummerierung/TechnischeNummern/IMSI/IMSI\\_Auswertung\\_Teil2.pdf?\\_\\_blob=publicationFile&v=2](http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Nummerierung/TechnischeNummern/IMSI/IMSI_Auswertung_Teil2.pdf?__blob=publicationFile&v=2) at 1.1.3.

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- **Limited, if any, human interaction.** M2M communications are predominantly an automated exchange of information between technical installations with no, or limited, human involvement.<sup>7</sup>
  - **Limited, if any, voice access to PSTN.** For most M2M communications, no user-initiated voice communications are enabled over the PSTN. There may be defined point-to-point applications, such as voice access to a concierge service or helpdesk managed by a vehicle manufacturer, but not the ability to call outside of that narrow scope.<sup>8</sup>
  - **Limited, if any, consumer-driven services.** For traditional applications, the use of E.164 numbers generally encompasses more end-user or consumer-driven services (directory listing, number portability, etc.). However, this is not typically the case for M2M services. In the M2M context, the M2M device makers or the M2M service providers typically contract with the mobile network operator (MNO); the MNO does not typically contract with the end-user of the M2M device. Therefore, the end-user is unlikely to change the wireless connectivity provider, as they do not have a relationship with that provider. If the M2M manufacturer changes MNOs, the general expectation is that the E.164 number would be changed along with the E.212 number assigned. Porting would not be required because the new MNO serving the M2M manufacturer would provide a new IMSI and a new MSISDN associated with it. In fact in most cases, machine-to-machine communications that involve limited consumer interaction, the end-user or consumer does not know, or does not need to know, the telephone number.

Considering the use of telephone numbers in the provision of M2M services, issues of public safety or the need to obtain customer information do not appear to be any greater for the extra-territorial use of foreign telephone numbers, than it is for IMSI codes.

Second, as communicated in its comments to BNetzA's consultation on *Numbering Plan for International Mobile Subscriber Identity (IMSI) Codes* filed 14 October 2015, AT&T believes that BNetzA does not need a specific notification that a foreign number is being used in Germany to ensure oversight of matters relating to public safety and consumer protection. The foreign number will be either permanently installed or permanently roaming on a German network, which will be lawfully notified as a public electronic communications network and therefore subject to BNetzA's jurisdiction for and responsibility to all public and third-party interests. AT&T believes that distinguishing between regulation of M2M-related numbering issues and regulation of other consumer protection matters is a sound policy approach.

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<sup>7</sup> Notice No. 1285/2016, Official Gazette No. 19 of 12.10.2016, *Hearing on the Extra-territorial Usage of Numbers in Connection with Machine-to-Machine Communication*. See [http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen\\_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf\\_Vfg\\_ExterritorialeNutzung.pdf;jsessionid=B3A309244E321303C5CDCB48E1F7361B?\\_\\_blob=publicationFile&v=2](http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf_Vfg_ExterritorialeNutzung.pdf;jsessionid=B3A309244E321303C5CDCB48E1F7361B?__blob=publicationFile&v=2) at 2.3.

<sup>8</sup> Ibid.

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### III. BNetzA's Proposed Notification Requirements for Use of Foreign E.164 Numbers in Germany could be Streamlined

In the event that BNetzA decides to maintain a notification requirement, AT&T recommends allowing for a more streamlined approach. In the first instance, AT&T suggests that any notification requirement should be limited to the extra-territorial use of German telephone numbers outside of Germany, and not apply to the use of non-German telephone numbers in Germany. In support of this approach, the Belgian regulator, BIPT, adopted a general principle<sup>9</sup> for addressing policy issues arising from extra-territorial use of numbers, specifically that the regulatory authority of the country where consumption takes place should be responsible for regulating that consumption, except for numbering, where the authority whose numbering plan is being used remains competent. Notably, BIPT's approach does not involve *any* requirement for notification.

However, if BNetzA is not persuaded to forego completely any form of notification for the use of foreign numbers in Germany, AT&T recommends a substantially modified approach for the use of such numbers. BNetzA's current proposal would require the notifying assignee of the foreign numbers to provide a description of the M2M service for which the foreign numbers will be used (including the names of persons in the M2M supply chain, i.e. for whom the M2M communication is provided respectively for which products it is used and which (legal or natural) persons will in the broadest sense use the foreign numbers). This would appear to amount to a requirement to file a notification for each distinct M2M deployment for which foreign numbers may be used. AT&T believes that requiring a single provider to furnish this level of detail for each individual customer whose M2M services are delivered via different parts of number blocks from the same foreign assigning authority could become unduly burdensome and disproportionate. For example, a foreign mobile operator may have dozens of M2M service provider customers today that offer asset tracking devices, all of which use number blocks assigned to the foreign mobile operator by the same foreign assigning authority.<sup>10</sup> AT&T respectfully submits that it would not be efficient or particularly useful for the foreign carrier to submit, or for BNetzA to receive, hundreds of these notifications (which as AT&T respectfully submits are not necessary – see II above). This would also

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<sup>9</sup> “We could establish the following general rule: the authority of the country where consumption takes place is responsible for regulating consumption, except as regards numbering, where the country whose numbering plan is used is responsible.” (“L'on pourrait établir la règle générale suivante: c'est l'autorité du pays où a lieu la consommation qui est compétente pour la réglementation de la consommation, sauf en ce qui concerne la numérotation, pour laquelle c'est le pays du plan de numérotation qui est compétent.”). *Consultation at the request of the BIPT Council of 25 November 2014 regarding the revision of the policy for the management of the numbering plan*. See <http://www.bipt.be/en/operators/telecommunication/Numbering/regulation/consultation-at-the-request-of-the-bipt-council-of-25-november-2014-regarding-the-revision-of-the-policy-for-the-management-of-the-numbering-plan> (French version) at p. 25.

<sup>10</sup> AT&T also notes that, in the case of roaming, BNetzA's proposed notification requirement applies only in the case of permanently roaming M2M devices. In the absence of any internationally agreed definition of permanent roaming, it will not always be possible to determine with certainty which M2M deployments are subject to any notification obligation.

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create a substantial administrative burden on BNetzA to meaningfully review such a volume of notifications.

AT&T believes that the proposed process can be streamlined, without diminishing BNetzA's policy goals of maintaining oversight, by making it possible for an assignee of foreign E.164 numbers (or its local German representative)<sup>11</sup> to file a single, general notification that provides the (1) entity holding the foreign numbers and a contact point for that entity, (2) range of foreign numbers to be used (including country code) and (3) the associated examples of M2M applications. This simplified approach would provide BNetzA ample information on the foreign numbers to be used/being used in Germany, and the set of M2M segments served in Germany, while not being unduly burdensome. BNetzA would then be able to follow up with the notifying party if any questions or issues were to arise regarding any particular M2M deployment or application.

Finally, AT&T urges BNetzA to consider the implications for its proposed notification requirement of Article 87(4) of the European Commission's *Proposed Directive establishing a European Electronic Communications Code*.<sup>12</sup> This would require national regulators to determine ranges of non-geographic number resources with a right for extra-territorial use and to transmit details of those ranges to BEREC for inclusion in a public register of all such number resources. It will be important to ensure that any national notification proposals, such as those being contemplated by BNetzA, and any eventual EU-wide arrangements for a public register are consistent and compatible, and do not result in undue administrative complexity for market players.

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AT&T applauds BNetzA for its foresight and decisive action to support the global development of M2M services. Once again Germany assumes a leadership role in establishing numbering usage policies to enable innovation and facilitate competition and growth in mobile communications. Therefore, AT&T

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<sup>11</sup> AT&T understands that a local German representative or affiliate could sign the notification form on behalf of the assignee of the foreign E.164 numbers. (See attachment to the draft Order on Extra-territorial Use of Foreign Numbers in Germany available at: [http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen\\_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf\\_Vfg\\_ExterritorialeNutzung.pdf;jsessionid=8FFFAB56C9D28955DE6DCD3DF7B14695?\\_blob=publicationFile&v=2](http://www.bundesnetzagentur.de/SharedDocs/Downloads/DE/Sachgebiete/Telekommunikation/Unternehmen_Institutionen/Nummerierung/Rufnummern/Mobile%20Dienste/Entwurf_Vfg_ExterritorialeNutzung.pdf;jsessionid=8FFFAB56C9D28955DE6DCD3DF7B14695?_blob=publicationFile&v=2) )

<sup>12</sup> Available at: <https://ec.europa.eu/digital-single-market/en/news/proposed-directive-establishing-european-electronic-communications-code>

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urges BNetzA to consider removing, or in the least streamlining, the notification requirement to further enable growth, reduce administrative work and lower production costs for the industry.



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