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February 23, 2018

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> Street, SW  
Washington, DC 20554

Re: *Telephone Number Portability, et al*, WC Docket Nos. 07-149 & 09-109,  
CC Docket No. 95-116

Dear Ms. Dortch:

Neustar, Inc. ("Neustar") writes in response to iconectiv's February 20, 2018, letter<sup>1</sup> and the North American Portability Management LLC's ("NAPM") February 23, 2018, letter<sup>2</sup> regarding the state of industry readiness for the April 8, 2018, cutover of the Number Portability Administration Center ("NPAC") services including specifically a reliable or workable contingency rollback. Because neither the NAPM nor the Transition Oversight Manager ("TOM") are willing to agree to any reliable, workable contingency rollback consistent with Federal Communications Commission ("FCC" or "the Commission") Chairman Ajit Pai's goal that the NPAC cutover be executed "without disruption to public safety, industry, the law enforcement community, or the public[,]"<sup>3</sup> iconectiv and the NAPM apparently seek to convince the Commission that either such possible disruption is unimportant or that the Commission should mandate Neustar's participation in the unreliable, unworkable, and untested manual contingency rollback approach. These positions are not practicable and inconsistent with the Chairman's February 2, 2018, letter seeking a seamless transition.

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<sup>1</sup> Letter from John T. Nakahata, Counsel to Telcordia Technologies, Inc., dba iconectiv, to the Hon. Ajit Pai, Chairman, Federal Communications Commission, WC Dockets Nos. 09-109, 07-149, and CC Docket No. 95-116 (Feb. 20, 2018).

<sup>2</sup> Letter from Todd D. Daubert, Counsel to the NAPM LLC, to the Hon. Ajit Pai, Chairman, Federal Communications Commission, WC Dockets Nos. 09-109, 07-149, and CC Docket No. 95-116 (Feb. 23, 2018) ("NAPM Letter").

<sup>3</sup> Letter from Ajit V. Pai, Chairman, Federal Communications Commission, to Lisa Hook, President and CEO, Neustar, Inc. et al, CC Docket Nos. 99-200 et al (Feb. 2, 2018) ("February 2, 2018 Letter").

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First, the Chairman has already announced that the parties must have “a workable contingency rollback approach before regional cutovers are set to begin.”<sup>4</sup> iconectiv’s and NAPM’s attempts to diminish the importance of reliable, workable contingency rollback is thus contrary to the Chairman’s goal of avoiding perilous service disruption, and furthermore is woefully naïve in light of basic Information Technology (“IT”) best practices. Second, as a legal matter, the Commission cannot now compel Neustar to participate in an untested manual contingency rollback following the launch of iconectiv’s service. Any such FCC directive would be in direct contravention of Neustar’s contracts with the NAPM addressing contingency rollback, Commission Rule § 52.26(b)(2) and (3), and twenty years of FCC precedent.<sup>5</sup>

There is no disagreement among the parties that the solution least likely to result in harmful disruption is a tested automated contingency rollback, which Neustar embraced more than a year ago.<sup>6</sup> Because the NAPM failed to achieve consensus on any appropriate rollback approach with sufficient implementation time, it now attempts to use its own self-imposed deadline to short cut its way to cutover by: a) diminishing the *requirements* of a rollback to the point where it provides little to no

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<sup>4</sup> *Id.*

<sup>5</sup> Change Order No. 4 to Amendment 97 to Contractor Services Agreement for Number Portability Administration Center/Service Management System between Neustar, Inc. and the North American Portability Management LLC, § 5.3 (Establishing that Neustar has no contingency rollback obligations other than negotiated by the parties); *see also Telcordia Techs., Inc. Petition to Reform Amendment 57 and to Order a Competitive Bidding Process for Number Portability Administration*, Order, 30 FCC Rcd 3082, ¶¶ 6-7 (2015) (“*Selection Order*”), *aff’d sub nom. Neustar, Inc. v. FCC*, 857 F.3d 886 (D.C. Cir. 2017). (explaining that the rights and responsibilities between the NAPM and LNPA are negotiated pursuant to private contract).; Commission Rule 52.26(b)(2) and (3) require North American Numbering Council resolution of any NAPM oversight issue before it reaches the Commission because it represents such a small minority of interests relating to local number portability (LNPA).

<sup>6</sup> Should consensus now be reached among the parties on a mutually acceptable and tested automated rollback plan, Neustar would be willing to develop and deliver such solution under its existing Transition Services Agreements *with no additional charges to the industry*.

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meaningful protection for consumers and operators; and b) categorically rejecting any *testing* proposals that could demonstrate the infeasibility in their preferred approach. As their February 23, 2018, letter makes clear, both of these efforts are a result solely of a constrained timeline – not a desire to establish a meaningful safety net for the transition.

The following table describes NAPM’s efforts<sup>7</sup> to define the requirements for a rollback, and the effect Neustar believes they would have on a non-disruptive and seamless cutover.

<b>Limiting a potential rollback to 24 hours or less</b>	Basic IT best practices offer no factual basis for the belief that the most catastrophic errors would be visible only in the first 24 hours. A safety net for a project of this sort must be in place until all relevant business scenarios and production conditions have been exercised.
<b>Preventing use of mass update or pooling transactions during a potential rollback period</b>	Consistent with the above limitation of 24 hours, it is not reasonable or conducive to stability to remove rollback options when core functionality has not yet been exercised. In addition, these features are a critical safety net in their own right to account for potential failures of mechanized interfaces – it is irresponsible to prohibit their usage in order to make a substandard rollback option more palatable.
<b>Eliminating Neustar’s requirements to provide bulk data downloads and audits of NPAC data until full restoration</b>	Removing this feature eliminates a vital tool for service providers to restore service to consumers after data integrity failures and connectivity losses. Particularly in light of the fact that the manual process has no defined requirements for how long it could take,

<sup>7</sup> See Tables 1 and 3 of the NAPM Letter.



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**Eliminate Neustar's service level  
and performance requirements  
during a rollback**

removing the tools indefinitely could exacerbate issues for providers and their customers.

NAPM believes that Neustar's concern is about penalties. In fact, it's a question of resources. If there were a failure, the Neustar resources that would be necessary to stabilize the NPAC using an unproven and untested solution would, at a minimum, negatively impact all its businesses.

As described in our February 16, 2018, filing, the levels of testing that Neustar has proposed for the manual solution are both reasonable and achievable. Neustar has urged that agreement on any rollback solution, manual or automated, be preconditioned on validation that it be successful if needed. Like any insurance policy, the probability that a rollback actually will be triggered is not relevant to this requirement. NAPM's proposals for purely voluntary, unsequenced, low-volume testing among a self-selected handful of providers, with no compulsory reporting of results and no defined success criteria, are flatly inconsistent with the reality of any failure. If a rollback were necessary, it would involve the entire industry making use of new and untested procedures, for the first time, with vital consumer services disrupted.

In assessing possible next steps, the Commission should consider the following:

- The current claim expressed by NAPM, TOM, and iconectiv that an automated rollback approach is both unnecessary and impractical contradicts the parties' original positions. In fact, beginning in 2016 and for a period of months thereafter, all parties worked diligently to establish an automated and fully testable rollback procedure. (Indeed, the automated approach which held the most promise as a foundation for agreement was not proposed by Neustar). The parties abandoned efforts to

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drive consensus on the specifics of an automated rollback plan only after delays in iconectiv's development combined with a constrained schedule generally.<sup>8</sup>

- TOM decided to limit the industry's options to a substandard manual process for rollback over the objections of Neustar, the party most responsible for ensuring its efficacy, and without making use of established industry procedures to solicit broad input and generate consensus.<sup>9</sup>
- The choice to forego an automated and testable contingency rollback plan is squarely at odds with accepted IT best practices. We disagree with iconectiv's assertion, set forth in its February 20 letter, that only a 100% guarantee of full coverage would justify an investment in basic automation, as a means of minimizing user disruption. Contrary to the parties' most recent statements, an automated solution will properly encompass all data and users, maximize speed of recovery, and most importantly, be repeatable and testable.<sup>10</sup>
- There is no factual basis for the parties' planning assumption that the most catastrophic potential issues will be limited to the first day after cutover of the new NPAC. Based on Neustar's experience managing the NPAC,

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<sup>8</sup> The parties' evolving position on contingency rollback is, in this manner, similar to the project's repeated reductions in the level of testing deemed necessary as a means of demonstrating readiness.

<sup>9</sup> The TOM's approach was presented to service providers and their partners by the TOM in July 2017 as a *fait accompli* with no opportunity for bodies such as the former LNPA Working Group of the NANC to conduct an independent assessment of operational impacts or alternative options. As a result, the approach lacks the credibility normally accorded industry decisions of this magnitude.

<sup>10</sup> Neustar has noted the opinions of multiple prominent and respected IT professionals, each of whom have opined on the importance of a robust and fully tested rollback plan. It is standard Neustar practice to incorporate a systematic rollback mechanism for all releases and technology upgrades even when the confidence of success is high.

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there are a whole host of material system issues which could take an extended period of production-level volumes to manifest. Furthermore, iconectiv's claim that limiting a potential rollback window to 24 hours would result in only "a few thousand" ports is dangerously misleading, and omits the vast majority of user activity which would need to be manually reconstituted.<sup>11</sup> It should also be noted that despite several months of discussions, TOM has provided no formal estimates with respect to how long it would take to fully restore service under even this amount of activity using the manual process it suggests.

- Neustar is not the sole party to the NPAC cutover expressing objections and reservations about the failure to provide for an automated rollback solution. Since the Chairman's letter of February 2, 2018, multiple service providers have expressed in public remarks that their existing operations cannot support the expectations inherent in the TOM's proposed plan.<sup>12</sup> No serious attempt has been made to garner feedback and acknowledgment from the vast majority of affected service providers, many of whom lack the infrastructure and resources of the major operators. The difficulty in soliciting the necessary degree of coordination for even a simulation of the TOM's approach is precisely what stands in the way of the approach's feasibility in the real world.

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<sup>11</sup> Neustar has reported to iconectiv, TOM, and NAPM that the total number of transactions (as opposed to completed ports) related to competitive porting in a single region in the 24 hours following a typical Sunday maintenance amounts to approximately 60,000 to 72,000. For further reference, one week's worth of solely competitive porting activity in a single region rises to nearly 500,000 transactions. The full 30-day soak period between the cutover of the Southeast region and subsequent regions would require restoration of 3.7 million transactions.

<sup>12</sup> For example, a representative from Charter Communications "is concerned manual resubmission of number-porting requests will be a huge burden for her company." *NARUC Telecom Committee Agrees to Modified Draft Resolution Backing Lifeline Resellers*, Communications Daily (Feb. 14, 2018). See generally *Neustar Town Hall NPAC Cutover*, Neustar (Feb. 15, 2018), <https://neustar.wistia.com/medias/zpexvfki4y>.



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Contrary to the NAPM's false assertion that Neustar will not participate in an industry-led rollback, Neustar's position is simply that it will not embrace a shortcut of basic rollback requirements. The NAPM and TOM have ignored Neustar's recommendations regarding minimum criteria, and have expressed no intention or ability to meaningfully demonstrate that the limited options they will accept are sound or reliable. As described in more detail in Neustar's February 16, 2018 Report, the parties' most recent attempts since the Chairman's February 2, 2018, letter to "skinny down" a proposed test plan for the manual process only serve to reinforce Neustar's view that the TOM's and NAPM's efforts to date fall short of Commission objectives with respect to harmful disruption.

As a matter of basic IT best practices, failure to establish and verify a mutually agreeable plan for contingency rollback should not be taken as a statement of confidence in the success of the NPAC cutover – but rather as a fundamental failure to properly acknowledge and mitigate basic risks. With 40 days remaining until the scheduled cutover date for 11 states in the Southeast region (the largest & most complex region), iconectiv's and NAPM's efforts to downplay the importance of a workable rollback solution to the Commission are dangerously inappropriate. Indeed, there are several reasons to believe that the risk profile for this project is higher, not lower, than the average project – thus making the need for a viable rollback plan all the more urgent:

- The iconectiv launch is a "flash-cut", impacting over 145 million U.S. telephone lines in the Southeast region in a single event. No options have been explored to run the systems in parallel prior to terminating the incumbent platform, or to incrementally expose smaller populations to potential disruption before wide release. The existing NPAC has more than 20 years of operational maturity, while the iconectiv platform – including hardware, software, data center, network facilities, and perhaps most importantly, personnel – is all being exposed to real-world conditions for the first time. The Functional Requirements Specification used by iconectiv to implement its service has already been proven insufficient as a means of fully replicating current NPAC behavior as evidenced by the myriad

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discrepancies already discovered.<sup>13</sup> In addition to launching a new platform, the cutover relies upon a conversion of 15 billion data elements from an unfamiliar data model. This is inherently risky, with common estimates of millions of potential errors that in this case will result in failure to connect calls and texts for individuals and business.

- Due to delays in development, testing on an ostensibly complete version of iconectiv's NPAC began in December 2017, only seven weeks ago. This represents a reduction of the time allocated for industry testing from one year in the original project plan to less than three months. NAPM and TOM have never disclosed the elements of the full-year testing regime that were abandoned in order to force-fit the testing into this smaller timeframe, and neither the TOM nor iconectiv have provided any convincing explanation as to why the full year was unnecessary. Nevertheless, either because of the compressed timeline or other readiness constraints, there are no current plans to perform even basic testing steps vital to service provider readiness, including but not limited to essential industry disaster recovery testing regularly performed with today's NPAC.
- Contrary to iconectiv's claims, the consequences for consumers and public safety of data corruption as part of the NPAC cutover are both real and significant. The NPAC contains the authoritative routing instructions for over 750 million consumer, business, and government lines – equivalent to over 85% of all U.S. numbers in service today. iconectiv's claim that the potential for corruption of non-pending data is of little importance is thus extremely misinformed when it comes to consumers and smaller operators, and calls into question the successor vendor's full understanding of the NPAC ecosystem, as well as the wisdom of proceeding without sufficient testing. Many operators frequently and consistently refresh whole copies of the NPAC database for call and text routing purposes; additionally, vital law enforcement and public safety functions rely inexorably on verifiable information from the LNPA. Should the data conversion elements of the

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<sup>13</sup> Contrary to the requirements of the *Selection Order*, Neustar and other commercial vendors have been forced to implement changes to back-end systems in order to accommodate changes in NPAC system behavior.





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NPAC cutover not be rigorously verified, consumer and public safety disruption, in the form of failed communications, is guaranteed.

Given the realities described above, an extended period of "learning on the job" is to be expected, notwithstanding iconectiv's assurances to the contrary. Accordingly, the Chairman's emphasis on a workable and reliable contingency rollback is both appropriate and necessary.

We look forward to engaging with the parties and the Commission on next steps.

Very truly yours,

A handwritten signature in blue ink, appearing to read "T. Navin", is written over the typed name and title.

Thomas J. Navin  
*Counsel to Neustar, Inc.*

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