

FCC FACT SHEET*
Advanced Methods to Target and Eliminate Unlawful Robocalls
Second Report and Order - CG Docket No. 17-59

Background: This item is part of the Commission's comprehensive strategy to combat the tide of unwanted telephone calls by addressing calls to reassigned phone numbers. The problem occurs when a legitimate caller tries to reach a consumer who expects a call but, unbeknownst to the caller, the number has been reassigned to someone else. Not only does the new consumer receive an unwanted call meant for the prior consumer, but the prior consumer is also deprived of expected calls.

What the *Second R&O* Would Do:

- Establish a single, comprehensive reassigned numbers database that will enable callers to verify whether a telephone number has been permanently disconnected, and is therefore eligible for reassignment, before calling that number.
- Require a minimum aging period of 45 days before permanently disconnected telephone numbers can be reassigned.
- Require voice providers that receive North American Numbering Plan numbers and the Toll Free Numbering Administrator to report on a monthly basis information regarding permanently disconnected numbers to the database.
- Select an independent third-party administrator, using a competitive bidding process, to manage the reassigned numbers database.
- Authorize the Administrator to establish the database by collecting start-up costs from providers using the same type of mechanism as other numbering administration costs.
- Authorize the Administrator to fund operating costs through database usage charges; and to recoup start-up costs and return them to providers through offsets to future number administration charges.
- Take steps to ensure that the data contained in the database are used appropriately and accessible to the widest possible array of users.
- Allow small voice providers additional time to begin maintaining and reporting data to the database.
- Direct the North American Numbering Council to make recommendations on technical and operational issues affecting the database, including usage fees.

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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of
Advanced Methods to Target and Eliminate
Unlawful Robocalls
CG Docket No. 17-59

SECOND REPORT AND ORDER*

Adopted: []

Released: []

By the Commission:

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* This document has been circulated for tentative consideration by the Commission at its December 12, 2018 open meeting. The issues referenced in this document and the Commission’s ultimate resolution of those issues remain under consideration and subject to change. This document does not constitute any official action by the Commission. However, the Chairman has determined that, in the interest of promoting the public’s ability to understand the nature and scope of issues under consideration, the public interest would be served by making this document publicly available. The FCC’s ex parte rules apply, and presentations are subject to “permit-but-disclose” ex parte rules. See, e.g., 47 CFR §§ 1.1206, 1.1200(a). Participants in this proceeding should familiarize themselves with the Commission’s ex parte rules, including the general prohibition on presentations (written and oral) on matters listed on the Sunshine Agenda, which is typically released a week prior to the Commission’s meeting. See 47 CFR §§ 1.1200(a), 1.1203.

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I. INTRODUCTION

1. Today we take another important action to curb the tide of unwanted telephone calls by addressing calls to reassigned phone numbers. These calls are a nuisance to those who receive them and also can expose legitimate business callers to litigation. The problem occurs when a caller tries to reach a consumer who expects a call but, unbeknownst to the caller, has disconnected the number. That number is often reassigned to a new consumer, who then receives an unwanted call meant for the prior consumer—and all too often multiple unwanted calls when, for example, the consumer misses the call or chooses to not to answer it. As a result, the previous consumer is deprived of expected calls. In addition, unwanted calls reduce callers' operational efficiency and effectiveness,¹ while subjecting them to potential liability for alleged violations of the Telephone Consumer Protection Act (TCPA).²

2. Although existing tools can help callers identify number reassignments, there has been no comprehensive and timely way to determine whether a number has been reassigned. As a result, consumer groups and callers have repeatedly asked the Commission to enable callers to quickly learn of all reassignments.³ Legislators have also sought a solution, first asking the wireless industry to voluntarily create a database,⁴ and then encouraging the Commission to proceed with a rulemaking to create a comprehensive reassigned numbers database.⁵

3. Today we address this problem by establishing a single, comprehensive database that will contain reassigned number information from each provider that obtains North American Numbering Plan (NANP) U.S. geographic numbers. It also will include toll-free numbers. The database will enable any caller to verify whether a telephone number has been reassigned before calling that number. And we leverage existing administrative structures as well as competitive bidding to minimize the costs of the database.

4. The database is part of a multi-pronged approach to addressing the problem of unwanted calls, which is the largest category of consumer complaints at the Commission.⁶ We have adopted rules enabling providers to block certain types of unlawful calls before they even ring a consumer's phone;⁷ are considering ways to enable providers to block other types of unlawful calls;⁸ are examining how

¹ See, e.g., Blackboard *NOI* Comments at 4; Credit Union National Association *NOI* Reply Comments at 6 (CUNA).

² See 47 U.S.C. § 227(b)(1)(A); 47 CFR § 64.1200(a)(1)-(2); see also *Rules and Regulations Implementing the Telephone Consumer Protection Act of 1991*, CG Docket No. 92-90, Report and Order, 7 FCC Rcd 8752 (1992).

³ See, e.g., Reply Comments of the National Consumer Law Center, CG Docket No. 02-278, at 8 (June 21, 2016); Reply Comments of Stage Stores, Inc., CG Docket No. 02-278, at 7-8 (Aug. 26, 2014); Reply Comments of the Computer & Communications Industry Association, CG Docket No. 02-278, at 2 (Aug. 25, 2014); Comments of Wells Fargo, CG Docket No. 02-278, at 9-10 (Aug. 8, 2014); Reply Comments of United Healthcare Services, Inc., CG Docket No. 02-278, at 12 (Mar. 24, 2014); ACA International, CG Docket No. 02-278, at 2 (Mar. 10, 2014) (ACA); ETA Letter at 1; Letter from Margot Saunders, Senior Counsel, National Consumer Law Center, to Marlene H. Dortch, Secretary, FCC, CG Docket No. 17-59, at 1-2 (July 6, 2017).

⁴ See Letter from Sen. John Thune and Sen. Edward J. Markey, U.S. Senate to CTIA (July 15, 2016).

⁵ See Letter from Sen. John Thune and Sen. Edward J. Markey, U.S. Senate, to FCC Chairman Ajit Pai (Oct. 3, 2017).

⁶ See Federal Communications Commission, Consumer Complaint Data Center, Quarterly Reports—Consumer Inquiries and Complaints, Consumer Complaint Data – Unwanted Calls, <https://opendata.fcc.gov/Consumer-and-Government-Affairs/Consumer-Complaints-Data-Unwanted-Calls/vakf-fz8e> (last visited Nov. 19, 2018).

⁷ See *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No. 17-59, Report and Order, 32 FCC, Rcd 9706 (2017).

⁸ See *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No. 17-59, Notice of Proposed Rulemaking and Notice of Inquiry, 32 FCC Rcd 2306 (2017).

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implementation of SHAKEN/STIR can help to restore trust in Caller ID;⁹ are sharing complaint data with the public;¹⁰ and are taking enforcement action against violators.¹¹ We have received hundreds of comments from consumers stating that they no longer answer their phone when it rings.¹² Even the co-winner of this year's Nobel Prize in Economics nearly missed the call notifying him that he had won the award because he twice let the call go to voicemail, thinking that it was an unwanted robocall.¹³ Even when consumers do not answer, they incur the costs of interruption, disruption, lost productivity, and emotional upheaval.¹⁴ It is obvious that the volume of unwanted calls is reducing the value of telephony to anyone who makes or receives calls.

⁹ See *Call Authentication Trust Anchor*, WC Docket No. 17-97, Notice of Inquiry, 32 FCC Rcd 6007 (2017).

¹⁰ See Federal Communications Commission, Open Data, Consumer Complaints, <https://opendata.fcc.gov/> (last visited Nov. 19, 2018).

¹¹ See, e.g., *Affordable Enterprises of Arizona, LLC*, Notice of Apparent Liability for Forfeiture, FCC 18-135 (Sept. 26, 2018) (proposing a penalty of \$37.5 million for apparent spoofing violations); *Best Insurance Contracts, Inc. and Philip Roesel, DBA Wilmington Insurance Quotes*, Forfeiture Order, FCC 18-134 (Sept. 26, 2018) (imposing a penalty of \$82 million for apparent spoofing violations); *Adrian Abramovich, Marketing Strategy Leaders, Inc., and Marketing Leaders, Inc.*, Forfeiture Order, FCC 18-58 (May 10, 2018) (imposing a penalty of \$120 million for apparent spoofing violations).

¹² See, e.g., Beryl Cook Comments, CG Docket Nos. 18-152 (June 19, 2018) (“[R]obocalls . . . have become a major nuisance to the point where I don’t answer any calls unless I know the number- and have missed some very important calls from service people because of that.”); Leah Hanson Comments, CG Docket Nos. 18-152 (June 19, 2018) (“I have missed many important phone calls since I don’t answer any numbers not installed on my phone, for fear it is a robocall, and answer once, then the calls escalate. My daughter left on a cruise, and named me the contact person. I said to her, ‘Oh great! Now I have to answer every robocall for fear it might be a call about you.’”); Sue Coon Comments, CG Docket Nos. 18-152 (June 19, 2018) (“Even though I don’t answer, I still have to check to see if the call is from someone I actually want to hear from.”); James Corwith Comments, CG Docket Nos. 18-152 (June 21, 2018) (“I receive so many robocalls that I don’t answer the phone unless I recognize the number and even then some sneak through as then have hijacked my neighbors phone number!”); Phyllis Poppalardo Comments, CG Docket Nos. 18-152 (June 17, 2018) (“My land line is just as bad, have stopped answering it--when I need it I use it.”); Robert Weinreb Comments, CG Docket Nos. 18-152 (June 16, 2018) (“They prevent me from receiving a call from no one that i don’t positively know; because I don’t answer anyone who doesn’t have call recognition . so no strangers. nor any 2nd lines from people or companies that i would want to hear from. These robocalls are attacking our society.”); Rosemarie Parker Comments, CG Docket Nos. 18-152 (June 16, 2018) (“Many people, including me, don’t answer the phone for ANY number not already on our contact list. This severely limits my legitimate use of my phone.”); Bernadette Folliott Comments, CG Docket Nos. 18-152 (June 25, 2018) (“It is so bad that I don’t answer calls that are just a number. If no person or business name shows on my cell, I don’t answer and let it go to voice mail. This means that I have to check my phone for messages several times a day.”); Brian Ragen Comments, CG Docket Nos. 18-152 (June 19, 2018) (“I now find that my cell phone is becoming useless as a telephone. Others don’t answer my calls, assuming they are from machines and only respond to voice messages or texts. I don’t answer calls as often as I once did, because, despite the blockers I use, so many robocalls get through.”); Elizabeth Nelson Comments, CG Docket Nos. 18-152 (June 19, 2018) (“We are inundated with robocalls to the point where we don’t answer our phone without checking the caller ID. If a phone is not readily available we let the call go to voicemail because more than likely there is no one there anyway.”).

¹³ Bopha Phorn, ABC News, Economist who won Nobel Prize thought early morning call was a telemarketer, let it go to voicemail -- twice! (October 8, 2018) <https://abcnews.go.com/US/economist-won-nobel-prize-thought-early-morning-call/story?id=58358633>.

¹⁴ See, e.g., Alisa von Riotte Comments, CG Docket Nos. 18-152 (June 16, 2018) (“Robocalls to my cell phone are much more problematic as they interfere with my patients’ care. At the hospital where I work I use my cell phone to replace a pager. I can’t tell you how many times I’ve been interrupted when talking to my charge nurse, or a patient, or another physician. The worst though, is when those despicable businesses disrupt a private, and what I consider sacred, doctor-patient interaction.”); Sue Coon Comments, CG Docket Nos. 18-152 (June 19, 2018) (“Each interrupts my work and makes it difficult to regain my train of thought.”); Lonnie Gordon Comments, CG Docket Nos. 18-152 (June 16, 2018) (“And even if I don’t answer my phone, I have to call my voicemail to delete them.”);

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II. BACKGROUND

5. The Commission's rules require providers to ensure the efficient use of telephone numbers by reassigning a telephone number to a new consumer after it is disconnected by the previous consumer.¹⁵ Once a consumer disconnects a number, he or she might not update all parties who have called in the past.¹⁶ When the old number is eventually reassigned, callers may inadvertently reach the new consumer who now has the reassigned number.

6. Approximately 35 million numbers are disconnected and made available for reassignment to new consumers each year,¹⁷ and no commenter disputes that unwanted calls to reassigned numbers are a significant problem for callers and consumers. Indeed, concern about calling reassigned numbers has caused some callers to stop making calls.¹⁸ The problem has become significant enough that commercial databases now exist to aid callers. However, these databases are not comprehensive, and thus callers and consumers alike continue to be frustrated by unwanted calls to reassigned numbers.

7. The Commission took the first step toward addressing the problem by launching a broad inquiry in July 2017.¹⁹ In response, a majority of commenters supported establishing a comprehensive

James Corwith Comments, CG Docket Nos. 18-152 (June 21, 2018) (“I even get robocalls at work and this even more annoying as I can not ignore the call based on the number because it could be a new customer calling. This not only costs me time it can also cost me customers if I am answering a robocall at the time they call.”); Sharon Abalos Comments, CG Docket Nos. 18-152 (June 29, 2018) (“I am self-employed, so these calls interrupt my work hours and waste my time which in turn costs me money!”); u.Hugo Rupp Comments, CG Docket Nos. 18-152 (June 18, 2018) (“I pay for my phone, it’s not a ‘free’ service in exchange for data collection and ad exposure. No, what it is, is harassment and also a kind of burglary. My phone gets broken into and my time & money gets stolen because i have to spend both to deal with these robots and their deployers.”); Phyllis Poppalardo Comments, CG Docket Nos. 18-152 (June 17, 2018) (“Fine the robocallers, they are costing me money on my cell. Virgin mobile refused to block robocalls, and it has cost me for every call--not mine—refuse to give me the numbers that are calling. I have had to block my cell phone myself, which is my emergency phone--because Virgin Mobile would not block it.”); Reginald Whitworth Comments, CG Docket Nos. 18-152 (June 17, 2018) (“I maintain a cell phone at significant cost. These auto calls are costly because they consume the time I pay for without my consent and stop me from receiving the calls I need for my work.”); Lisa Blake Comments, CG Docket Nos. 18-152 (June 19, 2018) (“As my husband was dying (he had two terminal illnesses, and was quite sick for a long time), we experienced only increasing robocalls. Many were scams—we especially heard often from that one that spoke of our being in trouble with the IRS. Each time it rang, I had to run to the phone to see if it was a doctor’s office or pharmacy, sometimes leaving Mel in the middle of something. I’ll never forget how these CONSTANT calls made our lives so much more difficult. They have only increased now, and every phone calls feels like a small electric shock to me, triggering anxiety.”).

¹⁵ See 47 CFR § 52.15. Once a number is disconnected, a service provider can designate it as an “aging number” for a period and subsequently reassign it to a new subscriber. See 47 CFR § 52.15(f)(ii) (“Aging numbers are disconnected numbers that are not available for assignment to another end user or customer for a specified period of time. Numbers previously assigned to residential customers may be aged for no more than 90 days.”).

¹⁶ The term “caller” includes, but is not limited to, a person or entity that initiates any call using a wireless, wireline, or interconnected VoIP service.

¹⁷ See North American Numbering Plan Administrator Number Resource Utilization/Forecast Reports (average of aggregate numbers for the period January 1, 2013 through December 31, 2016). While a number of parties have cited this figure, we note that at least one party has questioned whether the figure accurately reflects the volume of number reassignments. In the *Reassigned Numbers NOI* we sought comment on whether this number accurately reflects the volume of number reassignments, but received no other credible estimate. *Reassigned Numbers NOI*, 32 FCC Rcd at 6012, para. 14.

¹⁸ See, e.g., Blackboard, Inc. *NOI* Comments at 2-3 (Blackboard); Comcast Corporation *NOI* Comments at 2 (Comcast); Credit Union National Association *NOI* Comments at 7.

¹⁹ See *Advanced Methods to Target and Eliminate Unlawful Robocalls*, Second Notice of Inquiry, 32 FCC Rcd 6007 (2017) (“*Reassigned Numbers NOI*” or “*NOI*”).

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and timely database that allows callers to verify whether a number has been reassigned before making a call.²⁰

8. In March 2018, the Commission adopted a *Second Further Notice* proposing to establish a reassigned numbers database and seeking comment on the mechanics and policies associated with the database.²¹ Specifically, the Commission sought comment on: (1) the information that callers that choose to use a reassigned numbers database need from such a database; (2) how to ensure that the information is reported to a database; and (3) the best approach to making that information available to callers.²² The Commission also sought comment on its legal authority pursuant to section 251(e) of the Act to require recipients of NANP numbers to report reassignment or other information about those numbers.²³

9. Forty-five parties filed comments and thirteen parties submitted reply comments in response to the *Second Further Notice*. A broad range of commenters, including callers and associated trade organizations, consumer groups, state government, and cable and interconnected VoIP service providers favor establishing a single, comprehensive reassigned numbers database.²⁴ Data aggregators and some other commenters prefer multiple reassigned numbers databases.²⁵ Legislators urge the FCC to establish a comprehensive reassigned numbers resource,²⁶ and the U.S. Court of Appeals for the D.C. Circuit has favorably noted the Commission's efforts toward creation of such a database.²⁷

10. On the other hand, a number of voice providers and associated industry members contend that existing commercial resources better address the problem of reassigned numbers and that establishing

²⁰ See, e.g., Comcast Corporation *NOI* Comments at 10-11; National Consumer Law Center *et al.* *NOI* Comments at 1-4 (NCLC); National Rural Electric Cooperative Association *NOI* Comments at 3 (NRECA); NCTA *NOI* Comments at 1; Retail Industry Leaders Association *NOI* Comments at 3 (RILA); TracFone Wireless, Inc. *NOI* Comments at 1 (Tracfone). A minority of commenters expressed concerns about the potential costs of a database solution versus the benefits. See, e.g., American Cable Association *NOI* Comments at 4; CTIA *NOI* Comments at 14; The Electronic Transactions Association *NOI* Comments at 2 (ETA); Noble Systems Corporation *NOI* Comments at 1 (NSC); U.S. Chamber Institute for Legal Reform *NOI* Comments at 2-3 (USCC).

²¹ See *Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No.17-59, *Second Further Notice of Proposed Rulemaking*, FCC 18-31 (rel. Mar. 23, 2018) ("*Second Further Notice*").

²² *Second Further Notice* at 2, para. 8.

²³ *Id.*

²⁴ See, e.g., A to Z Communications *et al.* *Second Further Notice* Comments at 13 (A to Z); Alaska USA Federal Credit Union *Second Further Notice* Comments at 1 (Alaska CU); American Financial Services Association *Second Further Notice* Comments at 5 (AFSA); Comcast *Second Further Notice* Comments at 9; Massachusetts Department of Telecommunications and Cable *Second Further Notice* Comments at 2 (MDTC); NCLC *Second Further Notice* Comments at 1-2 (NCLC); National Retail Federation *Second Further Notice* Comments at 5 (NRF); RILA *Second Further Notice* Comments at 16.

²⁵ See, e.g., Alliance for Telecommunications Industry Solutions *Second Further Notice* Comments at 4 (ATIS); American Cable Association *Second Further Notice* Comments at 5; AT&T Services, Inc. *Second Further Notice* Reply Comments at 4 (AT&T); CenturyLink, Inc. *Second Further Notice* Comments at 7 (CenturyLink); Neustar, Inc. *Second Further Notice* Reply Comments at 3-4 (Neustar); NSC *Second Further Notice* Comments at 3-4; Tatango, Inc. *et al* *Second Further Notice* Comments at 5 (Tatango).

²⁶ See Letter from Sen. John Thune and Sen. Edward J. Markey, U.S. Senate, to FCC Chairman Ajit Pai (July 19, 2018); see also Letter from Sen. John Thune and Sen. Edward J. Markey, U.S. Senate, to FCC Chairman Ajit Pai (Oct. 3, 2017).

²⁷ See *ACA Int'l v. FCC*, 885 F.3d 687, 709 (D.C. Cir. 2018) (*ACA Int'l*). The court found, in part, that the Commission's allowance to callers of a single call to learn of a number's reassignment was arbitrary and capricious and set aside the Commission's treatment of reassigned numbers as a whole. The court favorably noted the Commission's efforts to create a reassigned numbers database. *Id.*

a government database is too costly as compared to the likely benefits.²⁸ They also contend that they should be able to recover their costs if the Commission establishes a single database.²⁹ Further, they argue that the Commission should address the issues raised in recent decision of the Circuit Court of Appeals for the D.C. Circuit (*ACA Int'l v. FCC*) vacating the Commission's interpretation of certain aspects of the TCPA before the Commission undertakes the effort and expense of establishing a reassigned numbers database.³⁰

III. DISCUSSION

11. Based on our review of the record, we establish a single reassigned numbers database. Specifically, we require providers to report the last date of permanent disconnection associated with their allocated and ported-in numbers to a reassigned numbers database administrator. A caller can then, if it chooses, use the database to determine whether a telephone number has been permanently disconnected after a date certain and therefore is no longer assigned to the party the caller wants to reach. We refer certain operational and technical issues to the North American Numbering Council and we expect to issue the solicitation for the new reassigned numbers database administrator in the next twelve months.

12. The approach we adopt today is consistent with recommendations in the record that we create a comprehensive and timely database that will supplement, not supplant, existing commercial solutions.³¹ It provides for a functionality to enable callers to avoid calling reassigned numbers³² and reflects the record in response to inquiries about how users would be able to access and interact with the database.³³

²⁸ See, e.g., *ACA NOI* Comments at 4; *CTIA Second Further Notice Reply* Comments at 8; *Neustar Second Further Notice* Comments at 11-12; *NSC NOI* Comments at 1; *Voice on the Net Coalition Second Further Notice* Comments at 1 (VON).

²⁹ See, e.g., *AT&T Second Further Notice Reply* Comments at 4; *Comcast Second Further Notice* Comments at 13-14; *Incompas Second Further Notice* Comments at 3; *ITTA Second Further Notice Reply* Comments at 3.

³⁰ See, e.g., *CTIA Second Further Notice* Comments at 2-3, 10; *ITTA – The Voice of America's Broadband Providers Second Further Notice Reply* Comments at 1-2 (ITTA); *Neustar Second Further Notice* Comments at 3-4; *NSC Second Further Notice* Comments at 2-4; *NTCA – The Rural Broadband Association Second Further Notice* Comments at 3 (NTCA).

³¹ See *infra*. para. 27; see also, e.g., *Neustar TCPA Compliance Solutions*, <https://www.neustar.biz/risk/compliance-solutions/tcpa> (last visited Nov. 19, 2018) (stating that: “Mitigating risk for your organization from violating the Telephone Consumer Protection Act is just the start of what Neustar’s advanced solution can do for your business. By using the most thorough identity resolution system in the industry, you’ll also see improved operational efficiencies and better ROI on your outbound calling.”); *Danal TCPA Compliance Solution*, <https://tcpaconfidence.com/> (last visited Nov. 19, 2018) (offering different value-added services such as monitoring phone deactivation and number transfers on an ongoing basis); *Payfone TCPA Compliance*, <https://www.payfone.com/> (last visited Nov. 19, 2018) (offering numerous authentication services); *Neustar Second Further Notice* Comments at 4 (“In addition to providing information about disconnected phone numbers, Neustar’s solution: (1) tracks the movement of telephone numbers from wireline to wireless devices, a key distinction for TCPA compliance purpose; (2) identifies numbers of Voice over Internet Protocol (“VoIP”) providers, which present TCPA risks, including the movement of telephone numbers to VoIP providers; (3) determines if a telephone number is still associated with the intended consumer, which involves utilizing additional intelligence to determine the name to number linkage, even if the initial consent was provided many years ago; and (4) leverages other unique insights to help companies make better and more informed dialing decisions.”).

³² See *Second Further Notice* at 2, para. 8.

³³ See, e.g., *AFSA Second Further Notice* Comments at 8; *CMC Second Further Notice* Comments at 8; *Comcast Second Further Notice* Comments at 8-9; *NAFCU Second Further Notice* Comments at 2; *SLSA Second Further Notice* Comments at 7.

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13. We decline to defer consideration of the database until after we address issues raised in *ACA International*; nor do we address in this Report and Order how a caller's use of this database would impact its potential liability under the TCPA for calls to reassigned numbers. The D.C. Circuit favorably noted the Commission's efforts to address reassigned numbers in deciding *ACA International*,³⁴ and we believe that establishing the database will satisfy our goal of minimizing unwanted calls to reassigned numbers regardless of how we resolve these other questions. We anticipate that use of the database will be a consideration when we address the reassigned numbers issues raised in that decision.³⁵

A. Aging Period

14. The more quickly a number is reassigned from one consumer to another, the less opportunity there is for callers to learn of the reassignment and the more likely it is that a caller will misdirect a call to the reassigned number.³⁶ Currently, our rules establish maximum times for how long numbers may be aged before reassignment—four months for toll-free numbers³⁷ and 90 days for other numbers³⁸—but do not contain any minimum aging period. In other words, a number used by one consumer today can be reassigned to another consumer almost immediately. Tatango asserts that some of the largest wireless carriers reassign disconnected numbers to new consumers in as few as two days.³⁹

15. In the *Second Further Notice*, we proposed a minimum aging period of 30 to 60 days.⁴⁰ We establish a minimum aging period of 45 days, midway between that proposal, for all numbers.⁴¹ We conclude that 45 days is an appropriate aging period because we allow 31 days to ensure each month's permanent disconnects are in the database before a number is reassigned and an additional two-week buffer to ensure consumers are fully protected. We agree with commenters that setting a minimum aging period will help bring more uniformity to the reassignment process⁴² and, in and of itself, will reduce calls to reassigned numbers by ensuring that a permanently disconnected number is not reassigned immediately and allowing time for callers to potentially receive notice through an intercept message⁴³ that the phone

³⁴ See *ACA Int'l*, 885 F.3d 687, 709.

³⁵ A number of commenters requested that if a reassigned numbers database is implemented that callers that make use of the database should not be subject to liability if they inadvertently call a new subscriber that has been reassigned the number. See *Second Further Notice* at 7, para. 31; see also, e.g., *AFSA Second Further Notice* Comments at 5; *CTIA Second Further Notice* Reply Comments at 10-11; *NCLC Second Further Notice* Comments 4-5.

³⁶ See, e.g., *ECG Second Further Notice* Comments at 3.

³⁷ See 47 CFR § 52.103(d).

³⁸ See 47 CFR § 52.15(f)(ii).

³⁹ See, e.g., *Tatango Second Further Notice* Comments at 8.

⁴⁰ *Second Further Notice* at 6, para. 23.

⁴¹ A minimum aging period is the length of time that a number must be aged before it is available for assignment to another end user or customer.

⁴² See, e.g., *Alaska FCU Second Further Notice* Comments at 2; *AFSA Second Further Notice* Comments at 4; *EFC Second Further Notice* Comments at 4; *ECG Second Further Notice* Comments at 3; *NAFICU Second Further Notice* Comments at 3-4; *NCLC Second Further Notice* Comments at 7; *SLSA Second Further Notice* Comments at 8; *Vibes Second Further Notice* Comments at 17. But see *ATIS Second Further Notice* Comments at 7 (noting that even though a short aging interval (e.g., fewer than thirty days) may negatively impact customer dialing and the billing support operations of interconnected carriers, ATIS does not support a minimum aging process because most providers already have long-established practices for minimum aging intervals.); see also *Second Further Notice* at 7, paras. 22-23.

⁴³ Intercept messages may announce that the call cannot be completed because the number is not in service or that the number has been changed.

number has been disconnected.

16. A minimum aging period of 45 days balances the need to allow a reasonable time before reassignment with the concerns, such as number exhaust and warehousing, that underlie the maximum aging periods already in our rules.⁴⁴ It is consistent with industry guidelines stating that “the use of short aging intervals (*e.g.*, fewer than thirty days) may negatively impact customer dialing and the billing support operations of interconnected carriers.”⁴⁵ It also balances the need for timely data with the burdens associated with more frequent reporting by allowing data to be updated on a periodic, but less than real-time basis, therefore reducing the costs of reporting and administration, while ensuring that information in the database is timely and accurate.⁴⁶ Callers similarly benefit from needing to check their calling lists against the database only periodically rather than having to query the database more frequently, especially when compared to needing to query the database in real time before each call.

17. We are unpersuaded by ATIS’ argument that we should refrain from setting a minimum aging period solely because service providers already have established their own individual minimum aging intervals.⁴⁷ We note that ATIS also acknowledges that its own guidelines state that “the use of short aging intervals (*e.g.*, fewer than thirty days) may negatively impact customer dialing and the billing support operations of interconnected carriers.”⁴⁸

B. Database Information, Access, and Use

18. *Database Contents.* We find that the database needs only the date of the most recent permanent disconnection of a particular number in order to enable a caller to determine whether that number has been permanently disconnected since a date provided by the caller.⁴⁹ Commenters were largely in agreement that legitimate callers need only to determine whether a number has been disconnected or reassigned since a date entered by the caller.⁵⁰ All legitimate callers should have the telephone number associated with the consumer they are attempting to reach and either the date they contacted that consumer or the date on which the caller could be confident that the consumer could still be reached at that number.⁵¹ Overall, we believe that this minimal amount of information strikes the correct balance between not overly burdening reporting providers while still offering callers the necessary functionality.

19. When a caller queries the database using a U.S. NANP number and a date, the database must provide a response of “yes”, “no”, or “no data” to explain whether the number has been reassigned (or more accurately permanently disconnected) since the date provided. The date may be any past date on which the caller reasonably is certain that the consumer the caller intends to reach could in fact be reached at that number. For example, a caller might select the date on which it last spoke to the consumer at that

⁴⁴ See 47 CFR § 52.15(f)(ii); 47 CFR § 52.103(d).

⁴⁵ *Id.*

⁴⁶ See *infra*. Section III.C.

⁴⁷ See ATIS *Second Further Notice* Comments at 7.

⁴⁸ *Id.*

⁴⁹ See *Second Further Notice* at 4-9, paras. 11-21.

⁵⁰ See, *e.g.*, ATIS *Second Further Notice* Reply Comments at 5; 15 SMS *Second Further Notice* Reply Comments at 3; Alaska CU *Second Further Notice* Comments at 2; ATIS *Second Further Notice* Comments at 5; CenturyLink *Second Further Notice* Comments at 8; GECU *Second Further Notice* Comments at 1; CUNA *Second Further Notice* Comments at 2-3; Edison Electric Institute *Second Further Notice* Comments at 10-11; InCharge Systems, Inc. *Second Further Notice* Comments at 2; National Consumer Law Center *et al.* *Second Further Notice* Comments at 6.

⁵¹ See, *e.g.*, EFC *Second Further Notice* Comments at 3; GECU *Second Further Notice* Comments at 1; iconectiv *Second Further Notice* Comments at 2-3; SLSA *Second Further Notice* Comments at 6.

(continued...)

number or the date the consumer last updated his contact information. Callers broadly agree that this type of query and response is all that is needed.⁵² iconectiv, the current manager of the Number Portability Administration Center similarly supports this approach, cautioning that a response other than “yes” or “no” should be used when there is no data available.⁵³

20. *A Comprehensive Database.* We conclude, consistent with the Commission’s existing number use reporting requirements, that the obligation to provide this information will be on all reporting carriers as defined in our numbering rules,⁵⁴ which include wireless, wireline, and interconnected VoIP providers that obtain numbers from NANPA.⁵⁵ We agree with the majority of both *NOI* and *Second Further Notice* commenters that the data must be comprehensive because any exclusions will leave both callers and consumers vulnerable to calls misdirected to reassigned numbers.⁵⁶ We also concur with several commenters that claim that mandatory reporting is necessary because the voluntary reporting alternative would yield data no more comprehensive than existing resources because not enough providers would voluntarily report.⁵⁷

21. We require reporting carriers as defined in Section 52.15(f)(2) of our rules, including those providers that receive their numbering resources indirectly, to provide to the database information about number disconnections.⁵⁸ This will best ensure the accuracy and comprehensiveness of the reassigned number information and is consistent with current number use reporting requirements. We conclude, however, that these providers should be able to delegate the task of reporting to the provider that receives the numbering resources directly from the NANPA or Pooling Administrator.⁵⁹ We disagree with commenters that service providers that do not obtain numbers directly from the NANPA or Pooling

⁵² CMC *Second Further Notice* Comments at Addendum, 2-3; Quicken *Second Further Notice* Comments at 2; RILA *Second Further Notice* Comments at 13; SLSA *Second Further Notice* Comments at 6.

⁵³ Telcordia Technologies, Inc. d/b/a iconectiv *Second Further Notice* Comments at 3 (iconectiv).

⁵⁴ For the purposes of this *Second Report and Order* “a ‘reporting carrier’ is “a telecommunications carrier that receives numbering resources from the NANPA, a Pooling Administrator or another telecommunications carrier,” which includes interconnected VoIP providers that directly obtain numbering resources pursuant to Commission authorization. 47 C.F.R. § 52.15(f)(2); *see also* *Numbering Policies for Modern Communications et al.*, Report and Order, 30 FCC Rcd 6839, 6849-50, para. 24 (2015) (imposing number utilization and reporting requirements directly on interconnected VoIP providers).

⁵⁵ *See* *Second Further Notice* at 9-16, paras. 32-60. We address the reporting of toll-free number data in paragraph 21.

⁵⁶ *See, e.g.*, AFSA *NOI* Comments at 1; Alaska CU *Second Further Notice* Comments at 2; ABA *Second Further Notice* Comments at 4; AFSA *Second Further Notice* Comments at 3, 7; Blackboard *NOI* Comments at 8; Comcast *NOI* Comments at 15; Comcast *Second Further Notice* Comments at 10; CUNA *NOI* Comments at 6; CUNA *Second Further Notice* Comments at 2; EFC *Second Further Notice* Comments at 4; GECU *Second Further Notice* Comments at 1; Genesys Telecommunications Laboratories, Inc. *NOI* Reply Comments at 2; GTL *Second Further Notice* Comments at 2; iconectiv *Second Further Notice* Comments at 4; ICBA *Second Further Notice* Comments at 5; MDTC *Second Further Notice* Comments at 3; NAFICU *NOI* Comments at 1; NAFICU *Second Further Notice* Comments at 3; NCLC *et al. NOI* Comments at 8; NCLC *et al. Second Further Notice* Comments at 5; NCHER *NOI* Comments at 3; National Retail Federation *NOI* Comments at 13-14; NCTA *NOI* Comments at 4; Quicken *Second Further Notice* Comments at 2; RILA *NOI* Comments at 14; RILA *Second Further Notice* Comments at 14-15; Student Loan Servicing Alliance *NOI* Comments at 5; The Internet Association *NOI* Comments at 4; Vibes *Second Further Notice* Comments at 19.

⁵⁷ *See, e.g.*, Comcast *Second Further Notice* Comments at 10; Tatango *Second Further Notice* Comments at 6.

⁵⁸ *See* 47 CFR § 52.15(f)(2).

⁵⁹ *See, e.g.*, Tatango *Second Further Notice* Comments at 13-14 (arguing that in some instances it might be more efficient and less costly for the entity indirectly receiving the numbers to report and therefore the parties should be able to contractually delegate the reporting requirements).

Administrator might not have knowledge of certain changes in the status of a number if they do not have control over the provision and deactivation of the number.⁶⁰ We believe these carriers know or could determine when a particular number is no longer in use by a particular customer and are therefore best situated to know when a number should be reported as disconnected.

22. We will also include toll-free numbers in the reassigned numbers database. Calls to reassigned toll-free numbers pose a problem to callers who waste time calling an unintended recipient and recipients who are responsible for paying the toll charge. We agree with the vast majority of commenters in the record that to be effective the reassigned numbers database needs to be as comprehensive as possible so that consumers are not left vulnerable.⁶¹ We do not anticipate that this requirement will either be a substantial reporting burden or substantially increase the cost of administering the reassigned numbers database. We disagree with ATIS—the only commenter to raise this issue—that because toll-free numbers, unlike non-toll-free numbers, are generally aged longer and are predominantly associated with businesses rather than individuals, the database will be sufficiently comprehensive without burdening toll-free providers with reporting these numbers.⁶²

23. The obligation to report the permanent disconnect status of toll-free numbers will be on the Toll Free Numbering Administrator. Toll-free numbers are administered separately than non-toll-free numbers by the Toll Free Numbering Administrator, which is currently Somos, Inc.⁶³ The Toll Free Numbering Administrator assigns toll free numbers to Responsible Organizations⁶⁴ and, unlike the NANPA in relation to non-toll-free numbers, is uniquely positioned to have real-time visibility into each toll free numbers disconnection status. We therefore conclude that it would be most expedient and efficient for the Toll Free Numbering Administrator, rather than individual Responsible Organizations, to bear the reporting requirement and direct the Toll Free Number Administrator to report data to the database on the same schedule as reporting carriers. We direct the Toll Free Numbering Administrator to revise its Service Management System tariff as appropriate to embody this responsibility of the Toll Free Numbering Administrator to report the disconnect status of toll free numbers to the reassigned numbers database, as set forth herein.

24. *Use of Database.* We take three steps to ensure that the data contained in the Reassigned Numbers Database is used appropriately and accessible to the widest possible array of users. First, we follow the practice of data minimization—the database will not contain information about subscribers other than the most recent date of permanent disconnections. Second, we limit the data available to any individual caller to a “yes”, “no”, or “no data” in response to a particular query. And third, we require

⁶⁰ See, e.g., Tatango *NOI* Comments at 9; TracFone *NOI* Comments at 2.

⁶¹ See, e.g., AFSA *NOI* Comments at 1; Alaska CU *Second Further Notice* Comments at 2; ABA *Second Further Notice* Comments at 4; AFSA *Second Further Notice* Comments at 3, 7; Blackboard *NOI* Comments at 8; Comcast *NOI* Comments at 15; Comcast *Second Further Notice* Comments at 10; CUNA *NOI* Comments at 6; CUNA *Second Further Notice* Comments at 2; EFC *Second Further Notice* Comments at 4; GECU *Second Further Notice* Comments at 1; Genesys Telecommunications Laboratories, Inc. *NOI* Reply Comments at 2; GTL *Second Further Notice* Comments at 2; iconectiv *Second Further Notice* Comments at 4; ICBA *Second Further Notice* Comments at 5; MDTC *Second Further Notice* Comments at 3; NAFICU *NOI* Comments at 1; NAFICU *Second Further Notice* Comments at 3; NCLC *et al.* *NOI* Comments at 8; NCLC *et al.* *Second Further Notice* Comments at 5; NCHER *NOI* Comments at 3; National Retail Federation *NOI* Comments at 13-14; NCTA *NOI* Comments at 4; Quicken *Second Further Notice* Comments at 2; RILA *NOI* Comments at 14; RILA *Second Further Notice* Comments at 14-15; Student Loan Servicing Alliance *NOI* Comments at 5; The Internet Association *NOI* Comments at 4; Vibes *Second Further Notice* Comments at 19.

⁶² See ATIS *Second Further Notice* Comments at 5.

⁶³ See generally 47 C.F.R. Part 52, Subpart D – Toll Free Numbers.

⁶⁴ A Responsible Organization, or “RespOrg,” is an “entity chosen by a toll free subscriber to manage and administer the appropriate records in the toll free Service Management System for the toll free subscriber.” 47 CFR § 52.101(b).

callers to certify the purpose for which they are using the database. We share commenters' concerns regarding potential misuse and believe that the steps we take below ensure the security of the information in the database.⁶⁵

25. We believe that establishing a database that returns only a “yes”, “no”, or “no data” response to queries best protects consumer privacy and providers' commercially sensitive information because callers will not have access to the underlying data. This approach reduces the potential for someone to use the data in a manner that is competitively sensitive (such as revealing details of a carrier's churn rate⁶⁶ or other sensitive business or operational metrics) or that undermines privacy or security.⁶⁷ We believe that the rules we adopt adequately address these concerns.

26. In addition, the database will be available only to callers who agree in writing that the caller (and any agent acting on behalf of the caller) will use the database solely to determine whether a number has been permanently disconnected since a date provided by the caller for the purpose of making lawful calls or sending lawful texts.⁶⁸ The Administrator will obtain this certification from each new user during the enrollment process and before allowing a new user to access the database.⁶⁹ This approach is consistent with how the Commission approached the National Do-Not-Call Registry, which contains phone numbers that should be used only for compliance with the Commission's do-not-call requirements.⁷⁰ All commenters that addressed this issue favored this approach.⁷¹

27. Finally, we take steps to promote the accessibility of the database to the widest array of possible users. Recognizing that callers of all sizes and levels of sophistication may choose to use the database, we require the database to offer the ability to process low-volume queries (*e.g.*, via a website interface), as well as to support high-volume queries (*e.g.*, via batch process and/or standardized

⁶⁵ iconectiv *Second Further Notice* Comments at 3 (including subscriber data or commercially sensitive information invites abuse and make the database a target for data mining); CenturyLink *Second Further Notice* Comments at 7-8 (information in database would be business- and market-sensitive, and data could be used by fraudulent callers or other bad actors for illicit or noncompetitive purposes).

⁶⁶ See CenturyLink *Second Further Notice* Comments at 7-8; see also iconectiv *Second Further Notice* Comments at 3.

⁶⁷ See CenturyLink *Second Further Notice* Comments at 7-8 (“information in a reassigned number database would be business and market-sensitive, especially as it relates to customer churn, and . . . efforts should be made to mitigate risk that the data could be used by fraudulent robocallers or other bad actors for illicit or noncompetitive purposes.”).

⁶⁸ We will address requests to access the database for other lawful purposes through our waiver process. We do not prejudge what other uses may be lawful or whether any particular use would satisfy the waiver standard.

⁶⁹ We anticipate that the certification would be substantially similar to “The user agrees and warrants that it, and any agent acting on its behalf, will access and use the reassigned numbers database solely to determine whether a number has been permanently disconnected since a date selected by the user, or its agent, for the purpose of making lawful calls or sending lawful texts. The date selected will be a date that the user, or its agent, reasonably and in good faith believes the person it intends to call or text could be reached at that number.” We anticipate that the Administrator will accomplish this requirement by having new users attest, potentially as part of an online registration process, that they agree to these limitations.

⁷⁰ See 47 CFR § 64.1200(c)(2)(E) (telemarketers must use the national do-not-call database only for compliance with state and federal law to prevent telephone solicitations to numbers in the database); see also FTC TSR Compliance Guide at printed page 57 <http://business.ftc.gov/documents/bus27-complying-telemarketing-sales-rule-#DNCprovisions> (visited Nov. 15, 2018).

⁷¹ See, *e.g.*, Alaska FCU *Second Further Notice* Comments at 2; Centurylink *Second Further Notice* Comments at 8; CCU *Second Further Notice* Comments at 2; EEI *Second Further Notice* Comments at 13-14; EFC *Second Further Notice* Comments at 4; NAFICU *Second Further Notice* Comments at 4; Tatango *Second Further Notice* Comments at 17; SLSA *Second Further Notice* Comments at 9; Vibes *Second Further Notice* Comments at 18-19.

(continued....)

application programming interfaces or other protocols). This, for example, will enable both a small medical office that texts appointment reminders to patients and a business that operates a large outbound call center to each use the database in a manner that is effective and efficient for its respective calling operations. In addition, some callers might use a third-party contractor to scrub their calling lists or to provide the capability to place autodialed or prerecorded or artificial voice calls. In order to promote the effectiveness of the database, it must be possible for these third-party contractors to use it as the agent of their client callers.

C. Database Administration

28. *Single Database.* In the *Second Further Notice*, we sought comment on the best approach to database administration, namely whether we should: (1) require providers to report reassigned number information to a single, FCC-designated database; (2) require providers to report such information to one or more commercial data aggregators; or (3) allow providers to report such information to commercial data aggregators on a voluntary basis.⁷²

29. We agree with the vast majority of commenters that a single, centralized database is the preferable option. Numerous commenters assert that having a single database subject to Commission oversight will help to ensure accuracy and integrity of the data,⁷³ a concern that we consider paramount given the goal of helping callers avoid calling reassigned numbers and intruding upon the privacy of the consumers who receive these calls. Keeping administration of the database under the Commission's direct oversight enables the Commission to better monitor operations and address any future issues.

30. Commenters that support a single database assert that it will be less costly for callers.⁷⁴ We agree. Our approach has the universal benefit of reducing transaction costs by providing a single point of contact both for providers to report reassigned number information and for callers to query that information. Under this approach, providers will avoid the costs of having to enter arrangements with multiple data aggregators and of establishing mechanisms for transmitting that data to each aggregator, which might have differing technical needs. We expect callers to realize similar transactional efficiencies, such as avoiding the need to research the accuracy of different data aggregators' query responses and avoiding the risk and increased liability from making calls to reassigned numbers due to the choice of a less accurate aggregator.

31. A small minority of commenters favor a commercial data aggregator approach.⁷⁵ These commenters assert that conditions could be crafted for commercial data aggregators to ensure the accuracy and integrity of the data, but do not explain how directly exercising authority over data

⁷² *Second Further Notice* at 8, para. 32.

⁷³ See A to Z *Second Further Notice* Comments at 13; Alaska CU *Second Further Notice* Comments at 1; AFSA *Second Further Notice* Comments at 5; California and Nevada Credit Union Leagues *Second Further Notice* Comments at 3 (CNCUL); Comcast *Second Further Notice* Comments at 9; CMC *Second Further Notice* Comments at 1; COHEAO *Second Further Notice* Reply Comments at 3; CUNA *Second Further Notice* Comments at 2; ECU *Second Further Notice* Comments at 1; EEI *Second Further Notice* Comments at 3-4; ECG *Second Further Notice* Comments at 1; GECU *Second Further Notice* Comments at 1; Genesys *Second Further Notice* Comments at 2; inCharge Systems Inc. *Second Further Notice* Comments at 2 (inCharge); ICBA *Second Further Notice* Comments at 5; MDTC *Second Further Notice* Comments at 2; NAFICU *Second Further Notice* Comments at 2; NRF *Second Further Notice* Comments at 7; OCUL *Second Further Notice* Comments at 1; RILA *Second Further Notice* Comments at 16; UHG *Second Further Notice* Comments at 1.

⁷⁴ See, e.g., Comcast *Second Further Notice* Reply Comments at 10.

⁷⁵ See American Cable Association *Second Further Notice* Comments at 3-6 (favoring allowing data aggregators to access service provider subscriber databases via API); CTIA *Second Further Notice* Reply Comments at 2-4; Neustar *Second Further Notice* Comments at 3-5; Noble *Second Further Notice* Comments at 3-4; NTCA *Second Further Notice* Comments at 3; Tatango *Second Further Notice* Comments at 5-6.

aggregators is necessary or appropriate given our broad authority over providers.⁷⁶ Further, they argue that a centralized database is unlikely to outperform existing resources that are already on the market,⁷⁷ that the centralized database would take too long to implement,⁷⁸ and that creating a single database amounts to creating a reassigned numbers database monopoly.⁷⁹ We disagree. A single database administered by an independent third-party administrator (Administrator) is a narrowly tailored exercise of our exclusive jurisdiction over numbering resources and the NANP in the United States.

32. Further, the database we establish will not, as Neustar claims,⁸⁰ directly compete with commercial data aggregators because aggregators' services typically include a broader range of information to authenticate identities and other information about consumers that goes well beyond the narrow ability of this database to determine whether a number has been permanently disconnected since a date provided by the caller.⁸¹ Moreover, nothing would prevent a caller from contracting with a commercial data aggregator to perform queries as its agent, including as part of the broader service the aggregator provides.

33. *Selection of Administrator.* We conclude that it is in the public interest for the reassigned numbers database to be administered by an independent third party administrator chosen under a competitive bidding process.⁸² Although commenters overwhelmingly support a single database administered by either the FCC or its designee, they do not identify a specific administrator.⁸³ As the Commission stated when it previously declined to act as the NANPA, no government agency has the resources to perform both regulatory and administrative functions regarding numbering resources

⁷⁶ See, e.g., 15 SMS *Second Further Notice* Reply Comments at 4 (seeking for the Commission to accredit specific data aggregators to access reassigned number data); American Cable Association *Second Further Notice* Reply Comments at 10 (suggesting that the Commission only allow callers that use data aggregators that meet specific data thresholds to avail themselves of a safe harbor.); CTIA *NOI* Comments at 8-9.

⁷⁷ See, e.g., Neustar *Second Further Notice* Comments at 3-5.

⁷⁸ See, e.g., Neustar *Second Further Notice* Comments at 11-12; NTCA *Second Further Notice* Comments at 3-4.

⁷⁹ See, e.g., Neustar *Second Further Notice* Comments at 10-11; Noble *Second Further Notice* Comments at 3-4; Tatango *Second Further Notice* Comments at 5-6.

⁸⁰ See Neustar *Second Further Notice* Comments at 10-11 (arguing that a single government database would compete against private enterprise); see also Letter from Thomas Navin, Counsel, Neustar, Inc., to Marlene H. Dortch, Secretary, FCC, CG Docket No. 17-59, at 1 (October 12, 2018).

⁸¹ See, e.g., Neustar TCPA Compliance Solutions, <https://www.neustar.biz/risk/compliance-solutions/tcpa> (last visited Nov. 19, 2018); Danal TCPA Compliance Solution, <https://tcpaconfidence.com/> (last visited Nov. 19, 2018) (offering different value-added services such as monitoring phone deactivation and number transfers on an ongoing basis); Payfone TCPA Compliance, <https://www.payfone.com/> (last visited Nov. 19, 2018) (offering numerous authentication services); Neustar *Second Further Notice* Comments at 4.

⁸² See *Second Further Notice* at 10-11, paras. 35-37.

⁸³ See A to Z *Second Further Notice* Comments at 13; Alaska CU *Second Further Notice* Comments at 1; AFSA *Second Further Notice* Comments at 5; California and Nevada Credit Union Leagues *Second Further Notice* Comments at 3; Comcast *Second Further Notice* Comments at 9; CMC *Second Further Notice* Comments at 1; COHEAO *Second Further Notice* Reply Comments at 3; CUNA *Second Further Notice* Comments at 2; ECU *Second Further Notice* Comments at 1; EEI *Second Further Notice* Comments at 3-4; ECG *Second Further Notice* Comments at 1; GECU *Second Further Notice* Comments at 1; Genesys *Second Further Notice* Comments at 2; inCharge Systems Inc. *Second Further Notice* Comments at 2; ICBA *Second Further Notice* Comments at 5; MDTC *Second Further Notice* Comments at 2; NAFICU *Second Further Notice* Comments at 2; NRF *Second Further Notice* Comments at 7; OCUL *Second Further Notice* Comments at 1; RILA *Second Further Notice* Comments at 16; UHG *Second Further Notice* Comments at 1.

effectively.⁸⁴ In contrast, the Administrator, like the NANPA, will be well situated to administer a reassigned numbers database because it will be an independent, non-governmental entity that must meet strict competitive neutrality requirements.⁸⁵

34. The Commission may be able to achieve operational and cost efficiencies by merging the administration of the reassigned numbers database with the already consolidated NANPA and Pooling Administrator functions under a single contract and a single administrator.⁸⁶ The current NANPA meets our selection requirements as it is independent and was selected previously pursuant to a competitive bidding process. We expect that leveraging the existing reporting and administration mechanisms between providers and the numbering administrators⁸⁷ will result in only a small, incremental burden resulting from reporting to the Administrator the date of the most recent permanent disconnection for each number. The Commission will therefore seek to procure a contract that consolidates the Administrator's functions with the present NANPA and Pooling Administrator functions as soon as reasonably practicable.

35. *Type of Information Reported to Database.* We require each provider to report to the Administrator for inclusion in the database the date of the most recent permanent disconnection for each number allocated to or ported to the provider.⁸⁸ This is all the data that is necessary for the Administrator to be able to provide a response of "yes", "no", or "no data" to queries of whether a number has been permanently disconnected since a date chosen by the caller making the query.⁸⁹ As a number of commenters note, the date of permanent disconnection is the earliest point in the reassignment process to identify a number reassignment, thereby giving callers the greatest amount of lead time to remove the number from their calling lists.⁹⁰ Indeed, once a number has been permanently disconnected, the consumer can no longer be reached at that number, even if the number has not yet been reassigned to another consumer.

36. *Date of Permanent Disconnection.* We agree with commenters that callers place more value in knowing when a number has been disconnected (*i.e.*, when the party they are trying to call can no longer be reached at that number) than when the number is reassigned (*i.e.*, when the number is associated with a new consumer with whom they have no relationship).⁹¹ Using the date of permanent disconnection in this context reduces the potential that callers will needlessly expend resources attempting to call the

⁸⁴ See *Administration of the North American Numbering Plan, Report and Order*, 11 FCC Rcd 2588, 2613-14, para. 57-59 (1995).

⁸⁵ 47 CFR §52.9.

⁸⁶ See *NANP Administration Order* (consolidating the two numbering administrators into a combined entity, subject to procurement requirements).

⁸⁷ For example, the Commission's rules already require providers to submit a use report of their current inventory of numbering resources to the NANPA. See 47 CFR § 52.15(f)(5).

⁸⁸ See *Second Further Notice* at 4-5, paras. 12-13.

⁸⁹ See, *e.g.*, ATIS *Second Further Notice* Reply Comments at 5 (noting that information in the database should be limited to the telephone number and date of disconnect); 15 SMS *Second Further Notice* Reply Comments at 3; Alaska CU *Second Further Notice* Comments at 2; ATIS *Second Further Notice* Comments at 5; CenturyLink *Second Further Notice* Comments at 8; GECU *Second Further Notice* Comments at 1; CUNA *Second Further Notice* Comments at 2-3; Edison Electric Institute *Second Further Notice* Comments at 10-11; InCharge Systems, Inc. *Second Further Notice* Comments at 2; National Consumer Law Center *et al. Second Further Notice* Comments at 6.

⁹⁰ See, *e.g.*, AFSA *Second Further Notice* Comments at 2-3.

⁹¹ See, *e.g.*, iconectiv *Second Further Notice* Comments at 3.

number, and the lead time between disconnection and reassignment⁹² reduces the likelihood that the consumer to whom the number is reassigned will receive calls intended for the prior consumer. It also minimizes the amount of information that providers must report, minimizes the complexity and size of the database, minimizes the types of inquiries the Administrator must facilitate, and minimizes the volume of data that must be supplied in response to queries.

37. Some commenters desire to have more extensive information made available in the database, such as subscriber names, addresses, demographic information, and the type of service (*e.g.*, wireless, wireline, etc.).⁹³ Adding additional information would go well beyond our specific goal of enabling callers to determine whether a number has been reassigned prior to placing a call to the number. We are concerned that the collection of additional data will substantially increase the reporting burden on providers and increase the administration costs associated with a larger, more complex database. We are particularly concerned that the reporting of this additional information would substantially increase the burden on small and rural providers.⁹⁴ We also are concerned that such additional data potentially creates unnecessary security and privacy risks given the limited purpose of the intended reassigned numbers database.⁹⁵

38. *Definition of Permanent Disconnection.* For this purpose, we define “permanent disconnection” as occurring when a subscriber permanently has relinquished a number, or the provider permanently has reversed its assignment of the number to the subscriber such that the number has been disassociated with the subscriber for active service in the service provider’s records.⁹⁶ Permanently disconnected numbers therefore do not include instances where the phone number is still associated with the subscriber, such as when a subscriber’s phone service has been disconnected temporarily for non-payment of a bill or when a consumer ports a number to another provider.⁹⁷ A ported number remains assigned to and associated with the same consumer even though a different provider serves the consumer after the number is ported.

⁹² In Section III.A, we adopt a minimum aging requirement to ensure that there is at least a 45-day period between the date of permanent disconnection and the earliest possible date the number may be reassigned to another consumer.

⁹³ *See, e.g.*, Coastal Credit Union *Second Further Notice* Comments at 1 (seeking to include the name of the subscriber in the database); CHEAO *Second Further Notice* Reply Comments at 3 (requesting, among other things, the name and demographic information linked to the number and whether the subscriber associated with the number has a preference not to be called); NAFICU *Second Further Notice* Comments at 3 (asking that the database provide the date the number was disconnected, current status, stage of reassignment process, and type of number (*e.g.*, mobile or residential)).

⁹⁴ *See, e.g.*, American Cable Association *Second Further Notice* Reply Comments at 11-12 (asking that the Commission structure the database in such a way as to minimize small voice service provider reporting costs).

⁹⁵ iconectiv *Second Further Notice* Comments at 3 (including subscriber data or commercially sensitive information invites abuse and make the database a target for data mining); CenturyLink *Second Further Notice* Comments at 7-8 (information in database would be business and market-sensitive, and data could be used by fraudulent callers or other bad actors for illicit or noncompetitive purposes).

⁹⁶ *See Second Further Notice* at 5-6, paras. 14-17.

⁹⁷ *See, e.g.*, A to Z *Second Further Notice* Comments at 17 (asking that the Commission ensure reporting of a disconnection matches actual changes in the subscriber as closely as possible); CNCUL *Second Further Notice* Comments at 2 (noting that numbers that have been temporarily disconnected should not be considered disconnected or reassigned); CCU *Second Further Notice* Comments at 1 (requesting exclusion of temporarily disconnected/suspended numbers for non-payment); CUNA *Second Further Notice* Comments at 3.

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39. *Reporting Frequency.* We require providers to report data to the Administrator on the 15th day of each month.⁹⁸ Commenters vary on how often providers should report, with some arguing that the data should be reported as seldom as every quarter,⁹⁹ and others advocating for updating as often as real-time.¹⁰⁰ Those commenters that favored more frequent reporting argue that it is necessary in order to ensure that the database is as accurate as possible, while those favoring less frequent reporting argue that the burden on providers needs to be minimized.¹⁰¹

40. We believe that monthly reporting properly balances the burden placed on providers with the need for callers to obtain timely information. Moreover, we conclude that more frequent reporting is unnecessary because we also establish a minimum aging period of 45 days,¹⁰² which will ensure that the database reflects current permanent disconnection information.

41. *Recordkeeping by Providers.* We require reporting providers to keep accurate and complete records associated with the permanent disconnections of their subscribers on a going-forward basis as soon as this information collection becomes effective, regardless of when the reassigned numbers database is launched. Requiring this recordkeeping before the reassigned numbers database is launched will ensure that reporting providers are appropriately tracking and have available the information they will need to update the database once it has launched, as well as a set of initial data spanning some period of time to make it more useful from launch. Thereafter, the records of permanent disconnections in the database will increase and become more comprehensive over time.

42. We disagree with commenters seeking to impose a retroactive requirement on reporting providers for seven or ten years' worth of data.¹⁰³ Because reporting providers have not previously been required to track or retain this data, compliance with such a requirement would be impossible for many reporting providers. Further, given the quantity of the data involved and the potential need to recreate data not retained in this form, we find such an approach to be overly burdensome.¹⁰⁴

43. In order to ease the burden on small providers, we will permit six additional months for them to begin maintaining and reporting data to the Administrator. A limited extension of time is appropriate for these providers because they have limited staffing resources and may require additional time to make any necessary system changes to track and report permanent disconnections.¹⁰⁵ We direct the Consumer and Governmental Affairs Bureau to separately announce the effective dates for smaller reporting providers when it announces the effective dates for larger reporting providers. We do not anticipate that this minimal delay will compromise the accuracy and comprehensiveness of the database

⁹⁸ See *Second Further Notice* at 7, paras. 22-23. The Consumer and Governmental Affairs Bureau will announce the effective date for providers to report once the database is operational.

⁹⁹ See, e.g., Alaska FCU *Second Further Notice* Comments at 2.

¹⁰⁰ See, e.g., ACA *NOI* Comments at 8; CUNA *NOI* Comments at 3; ECU *Second Further Notice* Comments at 1; GECU *Second Further Notice* Comments at 1; NRF *NOI* Comments at 11; OCUL *Second Further Notice* Comments at 2; Quicken *Second Further Notice* Comments at 2; RILA *NOI* Comments at 16; SLSA *NOI* Comments at 5.

¹⁰¹ *Id.*

¹⁰² See *supra* paras. 15-16; see also *Second Further Notice* at 12, paras. 39-41.

¹⁰³ See, e.g., AFSA *Second Further Notice* Comments at 3 (seeking seven to ten years of data prior to the creation of the database); CMA *Second Further Notice* Comments at Addendum, 3; NAFICU *Second Further Notice* Comments at 3.

¹⁰⁴ See, e.g., CCU *Second Further Notice* Comments at 1 (arguing that data should be from inception of the database because of the large volume); Tatango *Second Further Notice* Comments at 13.

¹⁰⁵ See American Cable Association *Second Further Notice* Comments at 11-12 (stating that most of its small provider members have fewer than ten employees and limited resources).

(continued....)

so significantly as to outweigh the burdens on these providers, which we believe are likely to be most disproportionately impacted by these recordkeeping, retention, and reporting requirements.

44. We set the threshold for determining which providers qualify for the six-month delay as those providers with 100,000 or fewer domestic retail subscriber lines as reported on their most recent Forms 477, aggregated over all the providers' affiliates. The Commission has used this threshold with regard to other recordkeeping, retention, and reporting requirements, including in the *Rural Call Completion Order*.¹⁰⁶ At the time, the Commission noted that the greater than 100,000-subscriber-line threshold should capture as much as 95% of all subscribers.¹⁰⁷ We anticipate here that the quantity of lines affected by such delay will be similarly few and therefore will not substantially impact the comprehensiveness of the database.

45. We decline, however, to further limit the reporting requirement for small providers, either by eliminating the obligation or by requiring less frequent reporting than larger providers.¹⁰⁸ All providers, including small providers, are already required to report number usage information to the NANPA, albeit on a less frequent basis.¹⁰⁹ Regardless of the size of the provider, the burden of compiling and reporting the date of permanent disconnection for NANP numbers each month is incremental and small compared to their overall reporting requirements. We do not believe that this incremental burden is so significant as to outweigh the need for accurate and comprehensive data, nor do we believe that the monthly reporting is overly onerous, as it is not likely to require small providers to implement new billing systems or otherwise to incur substantial additional costs.¹¹⁰

D. Costs and Cost Recovery

46. *Database Operation Costs.* We believe that, over the long term, callers should pay for the database. Thus, the Administrator's costs to operate the database following its establishment will be recovered through usage charges that the Administrator will collect from callers that choose to use the database.¹¹¹ This is consistent with the manner in which the Toll Free Numbering Administrator recovers its costs. Like the Responsible Organizations that benefit directly from the toll-free numbers database, callers that choose to use the reassigned numbers database benefit directly by reducing their potential liability for unlawful calls to reassigned telephone numbers and reducing operational costs with more efficient calling. Also, like Responsible Organizations, callers that use the database are a clearly identifiable user group that the Administrator can assess usage charges and that in turn can spread those costs across their customer bases. In contrast, costs for more generalized number administration performed by NANPA cannot be directly associated with any particular user group that could be billed for those costs and therefore are billed to providers that in turn recover those costs through charges for the services they provide. We therefore conclude that it is most economically efficient and rational for the

¹⁰⁶ See *Rural Call Completion*, WC Docket No. 13-39, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 16154, 16168, para. 27 (2013) (*Rural Call Completion Order*); see also *Restoring Internet Freedom*, WC Docket No. 17-108, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311, 622, para. 173 (2018); *Technology Transitions*, Order, WC Docket No. 13-3, 31 FCC Rcd 8283, 8323, para. 111 (2016).

¹⁰⁷ *Rural Call Completion Order*, 28 FCC Rcd at 16168, para. 25.

¹⁰⁸ See, e.g., Comcast *Second Further Notice Reply Comments* at 11 (arguing that small providers should be exempt from reporting because the reporting burden is too substantial).

¹⁰⁹ See 47 CFR § 52.15(f)(5).

¹¹⁰ See, e.g., American Cable Association *Second Further Notice Comments* at 7; American Cable Association *Second Further Notice Reply Comments* at 11-12.

¹¹¹ See, e.g., NTCA *Second Further Notice Comments* at 9-10 (costs should be borne by cost causer: callers); AT&T *Second Further Notice Reply Comments* at 2-3; Comcast *Second Further Notice Comments* at 13-14; INCOMPAS *Second Further Notice Comments* at 3; CenturyLink *Second Further Notice Comments* at 9; ITTA *Second Further Notice Reply Comments* at 3.

Administrator to recover reassigned numbers database costs from callers that choose to use the database. We disagree with Vibes Media, LLC and others that argue that there should be no cost for callers to use this database because they already pay for telephone service.¹¹² The database represents a new resource for callers that is not currently furnished by providers and thus not part of the cost of telephone service.

47. *Database Creation Costs.* The costs to establish the database and create the query functionality will be recovered using the same type of mechanism that is currently used to recover the NANPA's costs.¹¹³ Thus, database creation costs will be included along with the other numbering administration costs the Billing and Collection Agent bills to and collects from providers. This approach allows us to leverage existing processes to fund creation of the database. We adopt this approach to establish the database as quickly as possible using the most practical means of funding considering that it is not possible to recover these costs through database usage charges before the database is created.

48. We decline to seek Congressional funding for the database, as requested by several commenters.¹¹⁴ Seeking an appropriation is unnecessary because we already have authority to create the database. Further, seeking an appropriation would take additional time and therefore would delay launch of the database to the detriment of consumers and callers alike.

49. *Recovery of Database Creation Costs by Providers.* Just as providers recover other numbering administration costs, providers will be able fully to recover the costs they pay for creation of the database and query functionality, but no more. Because providers have no direct means of recovering these costs from callers that use the database, we therefore will require the Administrator to set usage charges at a level designed to recover current operating costs and, over time, the database creation costs paid by providers. We also will require the Administrator to limit the amount of the offset credited to each provider so that each provider recovers no more than the database creation costs it paid.

50. We agree with commenters asserting that providers' internal costs of tracking and reporting permanent disconnection dates to the Administrator will be routine—and minimal—operational expenses similar to those expenses providers already incur to report other number usage data.¹¹⁵ In addition, providers have no means of recovering these costs directly from callers that choose to use the database and, because these are costs internal to providers, they cannot be recovered through the offset mechanism that enables them to recover the database creation costs they pay. Accordingly, we anticipate that providers will recover these costs in their existing fees and charges.

51. The Toll Free Numbering Administrator, Somos, Inc.,¹¹⁶ similarly lacks a means to

¹¹² See, e.g., COHEAO *Second Further Notice* Reply Comments at 4 (requesting that use of the database be free to legitimate businesses); ECG *Second Further Notice* Comments at 1; Vibes *Second Further Notice* Comments at 11 (arguing that it already pays provider service fees and therefore it should not have to pay to use the database).

¹¹³ See *Second Further Notice* at 11-12, para. 38. Pursuant to its contract with the Commission and Section 52.16(a) of the Commission's rules, 47 CFR § 52.16(a), the Billing and Collection Agent, currently Welch LLP, is responsible for calculating, assessing, billing, and collecting payments for numbering administration functions, and for distributing funds to the entities that support these functions.

¹¹⁴ See, e.g., ABA *Second Further Notice* Comments at 5; AFSA *Second Further Notice* Comments at 5.

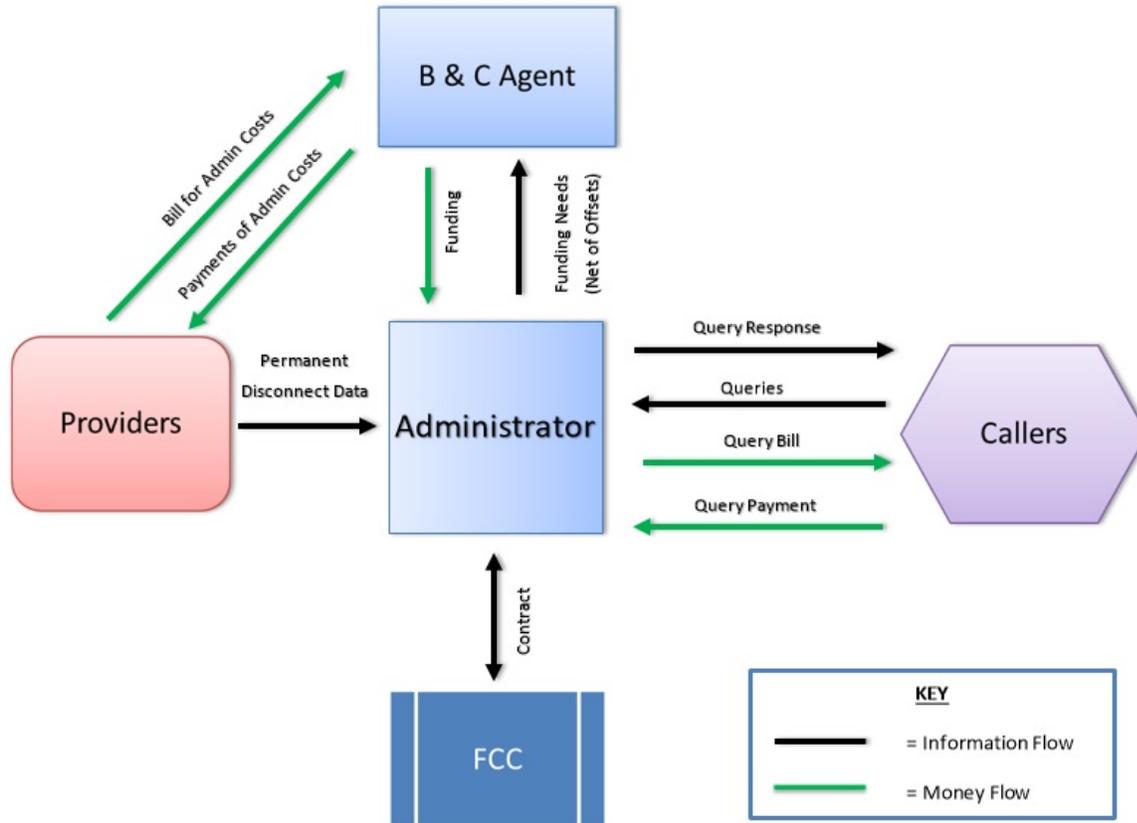
¹¹⁵ See, e.g., RILA *Second Further Notice* Comments at 15 (arguing that costs borne by covered service providers should be assumed to be incremental to, and recovered by, the provider's operations); 15 SMS *Second Further Notice* Reply Comments at 4; RILA *Second Further Notice* Comments at 15; Vibes *Second Further Notice* Comments at 11.

¹¹⁶ Somos is a not-for-profit corporation that provides the Toll Free Numbering Administrator function pursuant to FCC tariff, subject to section 61.38 of the Commission's rules. 47 CFR § 61.38. Somos must file annual tariff revisions pursuant to the applicable part 61 rules for a dominant carrier, subject to the tariff requirements and enforcement of the Commission pursuant to the Act and the Commission's rules. SMS/800 Order, 28 FCC Rcd at 15342, paras. 37-38; see also generally Somos, Inc., Tariff F.C.C. No. 1 (2018), <https://s3.amazonaws.com/filesprod.somos.com/documents/SMS800FunctionsTariff.pdf> (Toll Free Tariff).

(continued....)

directly bill callers for its internal reporting costs. Therefore, it may recover these costs in the same manner as other costs of toll-free number administration: by incorporating them into the cost recovery mechanism in its tariff. These reporting costs will be recovered along with all other allowable costs as part of the Toll Free Numbering Administrator’s revenue requirement for the ensuing tariff year(s).¹¹⁷ This means that all Responsible Organizations, and ultimately all toll-free subscribers, bear these costs in the same manner as they bear all other costs for toll-free number administration. We direct the Toll Free Numbering Administrator to reflect costs for reporting in the cost support filed with the Toll Free Tariff.¹¹⁸

52. The following diagram summarizes the relationships associated with reporting data, operating the database, and funding database operations:



E. Technical and Operational Issues

53. Commenters assert that the creation of a reassigned numbers database involves technical and operational requirements that could benefit from advice by the North American Numbering Council (Council). We agree. We believe the Council is especially well-situated to handle matters related to this

Previous tariff information is available at <https://apps.fcc.gov/etfs/public/tariff.action?idTariff=787>. Tariff modifications must be filed each January 31 (following the close of its fiscal year, which is the calendar year) updating the rates for its services effective during the next tariff year that begins in February. Each such filing must contain an updated cost of service study pursuant to Section 61.38. *Id.* Based upon that cost study, Somos’ rates and charges are adjusted to recover those forecasted costs over the ensuing tariff year.

¹¹⁷ Toll-free number administration costs are recovered via the Toll Free Numbering Administrator’s rates and charges, in the form of both transaction-specific fees, and monthly and other charges that are not tied to any specific transaction of number acquisition or change. Toll Free Tariff, Transmittal Nos. 4 and 5, Base Document pages 64-71 (effective Feb. 20, 2018).

¹¹⁸ 47 CFR § 61.38.

aspect of number administration because of its prior experience and collective expertise advising the Commission, among other things, on administration of number portability data and numbering administration procedures and systems. We also believe that the Council can address and advise on issues and considerations related to the Administrator collecting fees from database users, the billing and collection from service providers to be administered by the Billing and Collection Agent, and interaction and coordination necessary and advisable between the Administrator and the Billing and Collection Agent in performing these roles. We direct the Council to assess and address technical and operational issues consistent with the discussion below and, within six months, to report its recommendations on all of these issues to the Commission.

54. The Council, working through its Numbering Administration Oversight Working Group (Oversight Working Group), is to develop a Technical Requirements Document for the reassigned numbers database for review by the Commission. That Technical Requirements Document must contain a single, unified set of functional and interface requirements for technical interoperability and operational standards; the user interface specifications and data format for service providers to report to the Administrator; the user interfaces and other means by which callers may submit queries, including providing callers the abilities for high-volume and batch processing or to submit individual queries; appropriate safeguards to protect the privacy and security of subscribers, protect the database from unauthorized access, and ensure the security and integrity of the data;¹¹⁹ and keeping records of service provider's reporting and accounting.¹²⁰ In reaching its recommendations, the Council should consider the most cost-effective way of administering the database while ensuring that it will fully serve the intended purpose. We agree that the costs associated with the database can be kept reasonable¹²¹ and believe that the Council's input will be valuable in achieving that goal. We also direct the Council, through the Oversight Working Group, to provide guidance on any new or modified requirements for the Billing & Collection Agent contract that may be advisable or necessary with the implementation and operation of this database.

55. *Fee Issues.* We will refer to the Council questions of how the fee structure should be designed and the initial amount of fees. Specifically, the Council, through its Oversight Working Group, is to consider technical issues surrounding how the Administrator can collect fees from callers that use the database. How this can be best achieved will depend in part, we believe, on the user interface, the fee structure, the Administrator's costs to operate the database, and the amount of the fees necessary to enable providers to recover their costs of reassigned numbers database costs they pay to the Administrator. Therefore, the Council is to consider how to structure fees and the amount of such fees.¹²² Given the success of the National Do-Not-Call Registry and support in the record for using its fee structure as a

¹¹⁹ By way of example, this might include use of a one-way, proprietary seeded hash or other obfuscation of the caller identity as a layer of privacy protection at the central log. In this manner, a breach of the log would not necessarily divulge the identity of callers nor risk competitive information being disclosed.

¹²⁰ We note that some commenters addressed at least some of these issues in their comments. For example, many commenters favor maintaining data in the Comma Separated Values file format. *See, e.g.* AFSA *Second Further Notice* Comments at 4; CNCUL *Second Further Notice* Comments at 2; CUNA *Second Further Notice* Comments at 3; Vibes *Second Further Notice* Comments at 18. Other commenters, however, argue that it is prudent to allow the administrator to set certain technical requirements to minimize the burden on both the administrator and providers. *See, e.g.*, Comcast *Second Further Notice* Reply Comments at 13.

¹²¹ *See* Comcast *Second Further Notice* Reply Comments at 7-10 (noting that those who raise cost concerns about the database tend to portray it in its costliest form and that widespread usage of the database will allow for a low fee structure).

¹²² For example, the Council may wish to consider how to ensure that callers do not share the cost of accessing the database and thereby undermine the fee structure. *See* 47 CFR § 64.1200(c)(2)(E).

model,¹²³ the Council is to consider using that or a similar fee or subscription structure. The Council is also to consider using a per-query fee structure, which may be better suited to the manner in which this database will accept and respond to queries about individual numbers and may also be more appropriate for small-volume callers. We do not, however, now require use of any particular fee structure.

56. The Council will, within six months from the release of this *Second Report and Order*, issue its recommendations for implementing and operating the reassigned numbers database, including a Technical Requirements Document, and recommended fee structure, and fee amounts. The Council will meet to discuss these issues and vote on whether to approve the recommendations of its Oversight Working Group, subject to any amendments the Council may consider appropriate. We expect the Council's guidance, as well as any comments submitted by interested parties, will be incorporated into any contracting decisions.

F. Costs and Benefits

57. We conclude that the benefits of this database outweigh the costs imposed.

58. A comprehensive database has not been created in the absence of Commission action. Until now, our rules have not required providers to report data to this extent and frequency about disconnections or reassignments, or otherwise to make this data available. There is no comprehensive solution at present and it is evident that the marketplace is highly unlikely to create one on its own.¹²⁴ Providers generally prefer to continue with the non-comprehensive commercial resources already in existence.¹²⁵ Moreover, no provider is capable of offering a comprehensive resource because each provider has access only to its own reassigned numbers data. Similarly, we do not anticipate that data aggregators will provide an equivalent resource because doing so would require each aggregator to contract with every provider to obtain comprehensive data. The transaction costs of negotiating and administering thousands of bilateral contracts, and of incenting the providers to provide such data voluntarily, would be prohibitive. Further, because providers do not all keep records in the same manner¹²⁶ there is no certainty that the technical arrangements necessary to obtain the data would be uniform across all providers or that the data could be obtained within the same timeframes from all providers. If updates were made at different times, callers would be forced to submit queries before each call, which greatly increases transaction costs compared to the monthly checks enabled by this database.

59. The broad support among callers and consumer groups representing the interests of called parties—the two groups that ultimately will pay for this database and enjoy its benefits—therefore amply

¹²³ See, e.g., AFSA *Second Further Notice* Comments at 5 (supporting a yearly subscription fee); Comcast *Second Further Notice* Reply Comments at 9-10 (supporting the FTC's flat fee model); CUNA *Second Further Notice* Comments at 3-5; CMC *Second Further Notice* Comments at 1 (recommending a flat rate fee for access); CNCUL *Second Further Notice* Comments at 3 (noting that the Do-Not-Call Registry can provide guidance on ways to minimize costs and that small businesses that have customers within a limited geographic area could benefit from not incurring any fee for the first five area codes); OCUL *Second Further Notice* Comments at 2; Quicken *Second Further Notice* Comments at 2 (favoring the ability to pay a flat fee over a per query cost); see also Pub. L. 110-188 (Do-Not-Call Registry Fee Extension Act of 2007).

¹²⁴ See, e.g. Neustar *Second Further Notice* Reply Comments at 6 (noting that Neustar has 95% of disconnection data for wireless providers and not providing a percentage of disconnection data for other types of providers); see also *Second Further Notice* at 2, para. 5.

¹²⁵ See, e.g., American Cable Association *Second Further Notice* Reply Comments at 3-4; Centurylink *Second Further Notice* Comments at 7; Centurylink *Second Further Notice* Reply Comments at 3; CTIA *Second Further Notice* Comments at 4; ITTA *Second Further Notice* Reply Comments at 1-2; NTCA *Second Further Notice* Comments at 2.

¹²⁶ See, e.g., ATIS *Second Further Notice* Comments at 6.

demonstrates that the benefits outweigh the costs. We find that both of these groups are rational economic actors that have estimated costs and benefits in deciding to support this database.

60. Although we sought cost estimates associated with the reporting and creation and administration of the database in both the *NOI* and the *Second Further Notice*,¹²⁷ the record contains little in the way of quantified estimates of costs and benefits. Some commenters have offered comparative estimates that, while informative, do not provide specific dollar figures.¹²⁸ Thus, the record does not contain sufficient information for us to quantify the costs or benefits in a way that enables detailed numerical comparison. We therefore have developed our own estimate of the costs based upon our experience with other numbering administration databases. Our estimate of the costs presumes the Council, in developing the Technical Requirements Document and addressing other matters we will refer to it, will draw upon its expertise with other numbering databases to take an economically and technically reasonable approach to meeting the requirements we have established.¹²⁹ Thus, we find that the costs of the reassigned numbers database can be estimated based upon a comparison to the costs of another numbering administration database—the Number Portability Administration Center (NPAC).

61. We estimate the cost of this new database to be under \$1.2 million per year. We calculate this amount by comparing the anticipated operations of the reassigned numbers database to the NPAC, which costs approximately \$143 million per year and effectuates approximately 440 million transactions per year.¹³⁰ There are approximately 35 million disconnected numbers per year.¹³¹ As such, we expect the volume of updates to the reassigned numbers database to be approximately one-twelfth the volume of NPAC transactions.

62. The complexity of the two databases differs greatly. Each NPAC transaction is very complex because it involves tens of data fields to be transmitted and multiple interactions between multiple providers and the database to complete each port. In contrast, each transaction with this database is very simple. Each transaction requires the submission of two fields: a number and a date, indicating the number was disconnected effective the given date. And the resulting query will similarly require submission of only two fields—a number and a date—by the caller, a simple comparison of the date submitted by the caller to the date contained in the database for that number, and transmission back of a single field—“yes”, “no”, or “no data”. Finally, the NPAC database issues updates within at least 15 minutes of each new change per service-level agreement; the actual updates are much faster. Conversely, the disconnection database will be updated once per month. Considering these differences, we estimate the cost of each transaction with this database to be 10% of the cost of each NPAC transaction. This results in an operational cost estimate of \$1.2 million per year.

63. In addition to this annual cost, we expect there will be a setup cost for establishing the reassigned numbers database and a cost for callers to establish commercial relationships with the data

¹²⁷ *NOI*, 32 FCC Rcd 6011, 6015-6016, paras. 14, 30-31; *Second Further Notice* at 11, 13-14, paras. 45, 55, 60.

¹²⁸ See, e.g., Comcast *Second Further Notice* Reply Comments at 10 (arguing that if the FCC were to ensure a fee structure similar to the FTC's that callers would incur costs 50 times less than what they currently pay for commercial tools to avoid inadvertently dialing reassigned numbers).

¹²⁹ See *supra* paras. 47-50.

¹³⁰ See Letter from John T. Nakahata, Counsel to Telcordia Technologies, Inc. d/b/a iconectiv, to Marlene H. Dortch, Secretary, FCC, CC Docket No. 95-116, WC Docket Nos. 07-149, 09-109, at 3 (Mar. 25, 2015) (indicating that the cumulative seven-year price of Telcordia's bid to administer the NPAC was less than \$1 billion).

¹³¹ See North American Numbering Plan Administrator Number Resource Utilization/Forecast Reports (average of aggregate numbers for the period January 1, 2013 through December 31, 2016). While a number of parties have cited this figure, we note that at least one party has questioned whether the figure accurately reflects the volume of number reassignments. In the *Reassigned Numbers NOI* we sought comment on whether this number accurately reflects the volume of number reassignments but received no other credible estimate. *Reassigned Numbers NOI*, 32 FCC Rcd at 6012, para. 14.

base administrator and to update their systems to query this data base. Since this is an incremental addition to the NANPA functions, we presume that security infrastructure and hardware are already in place. With these parameters, we estimate the setup cost to be one week of development and three weeks of test. Presuming three full-time engineer equivalents at a burdened cost of \$67.50/hour¹³² results in a data base startup cost of \$32,400 (*i.e.*, 20 days multiplied by eight hours multiplied by \$67.50 multiplied by three engineers equals \$32,400). We estimate the startup costs for callers to be one day of development and three days of testing for a single full-time engineer equivalent, resulting in a per-caller startup cost of \$2,160 (*i.e.*, four days multiplied by eight hours multiplied by \$67.50 multiplied by one engineer equals \$2,160). As there will be a low-cost, internet interface for small companies, we find that companies larger than 100 employees will invest the information technology resources to integrate with the reassigned numbers database. Presuming every telemarketing bureau (NAICS Code 561422, 611 companies) and collection agency (NAICS Code 56144, 255 companies) implements these checks, the 866 companies¹³³ will have an aggregate startup cost of less than \$2 million (*i.e.*, \$2,160 multiplied by 866 companies equals \$1,870,560).

64. We have carefully crafted requirements to minimize costs and have declined requests to include additional types of data that go beyond the minimum necessary to enable callers to determine whether a number has been permanently disconnected after a date submitted by the caller. Comcast argues, in this regard, that commenters opposing the database tend to overestimate the cost based on functionality and reporting requirements that are well beyond the scope of the database we require providers to offer.¹³⁴ It also argues that the cost of this database could be materially lower than some databases callers currently use.¹³⁵ We agree with these points in determining that benefits here outweigh the costs. We disagree with commenters that favor conducting a further cost-benefit analysis before we move forward.¹³⁶

G. Legal Authority

65. As the Commission recently has with regard to other aspects of number administration,¹³⁷ we find that Sections 251(e) and 201 provide ample legal authority for the requirements we adopt today. Section 251(e) gives the Commission, “authority to set policy with respect to all facets of numbering administration in the United States.”¹³⁸ Section 201 authorizes the Commission to ensure that interstate

¹³² See Bureau of Labor Statistics Occupational Employment Statistics, 15-1131 Computer Programmers, 75% Programmer Wage Estimate, <https://www.bls.gov/oes/current/oes151131.htm> (last visited Nov. 19, 2018) (specifying a \$51.24 hourly wage); see also Bureau of Labor Statistics, Employee Costs for Employee Compensation – June 2018, News Release, USDL-18-1499 (Sept. 18, 2018) (citing average benefit costs of 31.7%).

¹³³ 2015 U.S. Census, Statistics of U.S. Businesses Data by NAICS Code, at https://www2.census.gov/programs-surveys/subs/tables/2015/us_6digitnaics_2015.xlsx?#. Note that we do not conclude that every single company in these codes will participate. Moreover, we do expect that companies from outside of these codes, such as financial services or health care companies, will participate. In our analysis we conclude the error in over-estimating the number of participating firms in the included NAICS codes for the most part offsets the number of participating firms from other NAICS codes.

¹³⁴ See Comcast *Second Further Notice* Comments at 7-12.

¹³⁵ Comcast *Second Further Notice* Reply Comments at 10.

¹³⁶ See, e.g., CTIA *Second Further Notice* Comments at 2; Centurylink *Second Further Notice* Comments at 3; Neustar *Second Further Notice* Comments at 3.

¹³⁷ See *Toll Free Assignment Modernization*, WC Docket No.17-192 and CC Docket No. 95-155, Report and Order, FCC 18-137, at 28, para. 94 (rel. Sept. 27, 2018).

¹³⁸ See *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Mobile Radio Service Providers; Area Code Relief Plan for Dallas and Houston, Ordered by the Public Utility Commission of Texas; Administration of the North American Numbering Plan; Proposed 708 Relief Plan and 630 Numbering Plan Area Code by Ameritech-Illinois*, CC Docket

(continued....)

rates are just and reasonable and to “prescribe such rules and regulations as may be necessary in the public interest to carry out the provisions of this Act.”¹³⁹

66. Section 251(e)(1) plainly gives the Commission authority to designate administrators for purposes of numbering administration¹⁴⁰ and databases long have been a tool used in numbering administration.¹⁴¹ Further, Congress in enacting the Act and the Commission in various proceedings have recognized that fair and impartial access to numbering resources is critical because “telephone numbers are the means by which telecommunications users gain access to and benefit from the public switched telephone network.”¹⁴² The purpose of telephone numbers is to enable callers to place calls to the person they wish to reach. These requirements promote that purpose.

67. Certain aspects of numbering administration long have been conducted by carriers themselves as part of the services they offer or provided on their behalf by the various numbering administrators, or both. For example, carriers and their numbering-related systems play a substantial role in local number porting in conjunction with the central role of the Local Number Portability Administrator and its NPAC system, and, in toll-free call numbering, some carriers operate their own Service Control Point databases (updated periodically with data from a database operated by the Toll Free Number Administrator) for servicing real-time per-call toll-free call routing queries from originating carriers. We similarly find it is just and reasonable, in accordance with Section 201, for the Administrator to collect fees for using the database.

IV. PROCEDURAL MATTERS

68. *Final Regulatory Flexibility Act Analysis.* Pursuant to the Regulatory Flexibility Act of 1980, as amended,¹⁴³ the Commission’s Final Regulatory Flexibility Analysis in this Report and Order is attached as Appendix C.

69. *Paperwork Reduction Act of 1995 Analysis.* This document contains new or modified information collection requirements subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. It will be submitted to the Office of Management and Budget (OMB) for review under Section 3507(d) of the PRA. OMB, the general public, and other Federal agencies are invited to comment on the new or modified information collection requirements contained in this proceeding. In addition, we note that pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, see 44 U.S.C. 3506(c)(4), we previously sought specific comment on how the Commission might further reduce the information collection burden for small business concerns with fewer than 25 employees.

70. *Congressional Review Act.* The Commission will send a copy of this Report and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. 801(a)(1)(A).

Nos. 96-98, 95-185, and 92-237, NSD File No. 96-8, IAD File No. 94-102, Second Report and Order and Memorandum Opinion and Order, 11 FCC Rcd 19392, 19512, para. 271 (1996) (*LNP Second Report & Order*).

¹³⁹ 47 U.S.C. § 201(b).

¹⁴⁰ “The Commission shall create or designate one or more impartial entities to administer telecommunications numbering . . .” 47 U.S.C. § 251(e)(1).

¹⁴¹ Databases are at the heart of numbering administration and call routing. Examples include the Number Portability Administration Center operated by the Local Number Portability Administrator (LNPA) and the TFNA’s central SM System Database, as well as databases operated by industry/commercially and funded by the carriers such as the Local Exchange Routing Guide and the wireless industry’s Common Short Code System.

¹⁴² *LNP Second Report & Order*, 11 FCC Rcd at 19508, para. 261; see Administration of the North American Numbering Plan, CC Docket No. 92-237, Report and Order, 11 FCC Rcd 2588, 2591, para. 4 (1995).

¹⁴³ 13 CFR § 121.201, NAICS code 517911.

71. *Materials in Accessible Formats.* To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an email to fcc504 @fcc.gov or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

V. ORDERING CLAUSES

72. **IT IS ORDERED**, pursuant to the authority contained in Sections 4(i)-(j), 201(b) and 251(e) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i)-(j), 201(b), 251(e), that this *Second Report and Order* **IS ADOPTED** and that Parts 52.15, 52.103, and 64.1200 of the Commission's rules, 47 CFR §§ 52.15, 52.103, 64.1200, are amended as set forth in Appendix A. These sections, which contain new or modified information collection requirements that require review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act (PRA), shall become effective 30 days after the Commission's publication of a notice in the Federal Register announces approval by OMB under the PRA.

73. **IT IS FURTHER ORDERED** that the North American Numbering Council shall, within six months from release of this *Second Report and Order*, address in a report to the Commission the technical and operational issues consistent with this *Second Report and Order*, and that the Consumer and Governmental Affairs Bureau, in conjunction with the Wireline Competition Bureau, shall coordinate with the Council on those issues to ensure that they are addressed fully and timely.

74. **IT IS FURTHER ORDERED** that this *Second Report and Order* is effective upon its release.

75. **IT IS FURTHER ORDERED** that the Commission's Consumer & Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this Report and Order to Congress and the Government Accountability Office pursuant to the Congressional Review Act, see 5 U.S.C. § 801(a)(1)(A).

76. **IT IS FURTHER ORDERED** that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, **SHALL SEND** a copy of this *Second Report and Order*, including the Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A

Final Rules

PART 52 -- Numbering

Subpart B – Administration

Amend § 52.15(f) by revising subsection (1)(ii) and adding new subsection (8) as follows:

§ 52.15(f) Mandatory reporting requirements — (1) Number use categories. Numbering resources must be classified in one of the following categories:

* * * * *

(f) * * *

(1) * * *

(ii) *Aging numbers* are disconnected numbers that are not available for assignment to another end user or customer for a specified period of time. Numbers previously assigned to residential customers may be aged for no less than 45 days and no more than 90 days. Numbers previously assigned to business customers may be aged for no less than 45 days and no more than 365 days.

(8) *Reports of Permanently Disconnected Numbers* — Reporting carriers must report information regarding NANP numbers in accordance with section 64.1200(1) of this title.

Amend § 52.103(d) by revising to read as follows:

(d) *Disconnect Status*. Toll free numbers must remain in disconnect status or a combination of disconnect and transitional status for no less than 45 days and for no more than 4 months. No requests for extension of the 4-month disconnect or disconnect and transitional interval will be granted. All toll free numbers in disconnect or transitional status must go directly into the spare or unavailable category upon expiration of the 4-month disconnect or transitional interval. A Responsible Organization may not retrieve a toll free number from disconnect or transitional status and return that number directly to working status at the expiration of the 4-month disconnect or transitional interval,

PART 64 – Delivery Restrictions

Amend § 64.1200 by adding new subsection (1) as follows:

* * * * *

(1) *Reporting Requirements*. A reporting carrier subject to section 52.15(f) of this title shall:

(1) Maintain records of the most recent date each North American Numbering Plan (NANP) telephone number allocated or ported to the reporting carrier was permanently disconnected.

(2) Beginning on the 15th day of the month after the Consumer and Governmental Affairs Bureau announces that the Administrator is ready to begin accepting these reports and on the 15th day of each month thereafter, report to the Administrator the most recent date each NANP telephone number allocated

to or ported to it was permanently disconnected.

(3) For purposes of this paragraph (1), a NANP telephone number has been permanently disconnected when a subscriber permanently has relinquished the number, or the provider permanently has reversed its assignment of the number to the subscriber such that the number has been disassociated with the subscriber. A NANP telephone number that is ported to another provider is not permanently disconnected.

(4) Reporting carriers serving 100,000 or fewer domestic retail subscriber lines as reported on their most recent Forms 477, aggregated over all the providers' affiliates, must begin keeping the records required by paragraph (1)(1) six months after the Commission publishes in the Federal Register a notice that the Office of Management and Budget has approved the information collection associated with paragraph (1)(1) and must begin filing the reports required by paragraph (1)(2) no later than the 15th day of the month that is six months after the date announced by the Consumer and Governmental Affairs Bureau pursuant to section 64.1200(1)(2).

APPENDIX B

List of Commenters

<u>Commenter</u>	<u>Abbreviation</u>
15 SMS Industry Commenters	15 SMS
A to Z Communications <i>et al.</i>	A to Z
ACA International	ACA
AT&T Services, Inc.	AT&T
Alarm Industry Communications Committee	AICC
Alaska USA Federal Credit Union	Alaska CU
Alliance for Telecommunications Industry Solutions	ATIS
American Bankers Association	ABA
American Cable Association*	American Cable Association*
American Financial Services Association	AFSA
Appelbaum, Jonathan	Appelbaum
California and Nevada Credit Union Leagues	CNCUL
Call Fire, Inc.	CallFire
CenturyLink, Inc.*	CenturyLink*
Coalition of Higher Education Assistance Organizations	CHEAO
Coastal Credit Union	CCU
Comcast Corp.*	Comcast*
Consumer Mortgage Coalition	CMC
Credit Union National Association	CUNA
CTIA*	CTIA*
Eastman Credit Union	ECU
Edison Electric Institute	EEI
Education Finance Council	EFC
Encore Capital Group	Encore
GECU	GECU
Genesys Telecommunications Laboratories, Inc.	Genesys
Telecordia Technologies, Inc. d/b/a iconectiv	iconectiv
inCharge Systems Inc.	inCharge
Incompas	Incompas
Independent Community Bankers of America	ICBA
ITTA – The Voice of America’s Broadband Providers	ITTA
Massachusetts Department of Telecom & Cable	MDTC
Minnesota Credit Union Network	MCUN
National Association of Federally-Insured Credit Unions	NAFICU
National Consumer Law Center <i>et al.</i>	NCLC
National Retail Federation	NRF
Neustar, Inc.*	Neustar*
Noble Systems Corporation	NSC
NTCA – The Rural Broadband Assoc.	NTCA
Ohio Credit Union League	OCUL
Professional Association for Customer Engagement	PACE
Quicken Loans Inc.	Quicken
Retail Industry Leaders Association*	RILA*
Sorenson Communications, LLC	Sorenson
Student Loan Servicing Alliance*	SLSA*
Tatango, Inc. <i>et al.</i>	Tatango

TracFone Wireless, Inc.

United Health Group

U.S. Chamber of Commerce Institute for Legal Reform

Vibes Media, LLC

Voice on the Net Coalition

TracFone

UHG

USCC

Vibes

VON

* filing both comments and reply comment (bold - reply comments only).

APPENDIX C

Final Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended, (RFA),¹⁴⁴ an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Second Further Notice of Proposed Rulemaking (Second Further Notice)*.¹⁴⁵ The Commission sought written public comment on the proposals in the *Second Further Notice*, including comment on the IRFA. The comments received are discussed below. This Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.¹⁴⁶

A. Need for, and Objectives of, the Proposed Rules

2. This *Second Report and Order* takes another important action to curb the tide of unwanted calls. We address this problem by establishing a single, comprehensive database that will contain reassigned number information about toll-free numbers and from each voice provider that obtains North American Numbering Plan (NANP) U.S. geographic numbers. It also will include toll-free numbers. The database will enable any caller to verify whether a telephone number has been reassigned before calling that number. And we leverage existing administrative structures as well as competitive bidding to minimize the costs of the database. A single database administered by an independent third-party administrator (Administrator) will provide callers with a single point of contact for callers. Our approach solves a longstanding problem for consumers and callers alike, and does so in a way that minimizes burdens on voice providers and callers.

3. Specifically, the *Second Report and Order* (1) establishes a minimum aging period of 45 days for all aging numbers to allow callers greater opportunity to learn of a number reassignment;¹⁴⁷ (2) requires the Toll Free Numbering Administrator and providers that receive North American Numbering Plan numbers to report on a monthly basis information to a database whereby a caller can determine whether a number has been permanently disconnected since a date provided by the caller;¹⁴⁸ (3) concludes that a single database containing the most recent permanent disconnection date for each number allocated to or ported to the provider, is the most efficient way to make reassigned number information available to callers;¹⁴⁹ (4) funds start-up costs – costs to establish the database and create the query functionality – by collecting those costs from providers using the same type of mechanism as other numbering administration costs;¹⁵⁰ (5) authorizes the Administrator to fund operating costs through usage charges to callers that choose to use the database;¹⁵¹ (6) authorizes the Administrator to recoup start-up costs paid by providers and to return them to providers through offsets to future number administration charges;¹⁵² and

¹⁴⁴ 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

¹⁴⁵ *See Advanced Methods to Target and Eliminate Unlawful Robocalls*, CG Docket No.17-59, Second Further Notice of Proposed Rulemaking, FCC 18-31 (rel. Mar. 23, 2018) (“*Second Further Notice*”).

¹⁴⁶ *See* 5 U.S.C. § 604.

¹⁴⁷ *See Second Report and Order*, Section III. A.

¹⁴⁸ *See Second Report and Order*, Section III. B.

¹⁴⁹ *Id.*

¹⁵⁰ *See Second Report and Order*, Section III. D.

¹⁵¹ *Id.*

¹⁵² *Id.*

(continued....)

(7) directs the North American Numbering Council to make recommendations on technical and operational issues, including usage fees.¹⁵³

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

4. In the *Second Further Notice*, we solicited comments on how to minimize the economic impact of the new rules on small businesses. We received one comment directly addressing the IRFA from NTCA.¹⁵⁴ NTCA argues that the IRFA was deficient because the measures on which we sought comment were vague and lacked specificity.¹⁵⁵

5. We also received several comments addressing small business concerns.¹⁵⁶ One commenter requested that small providers be excluded from any mandatory reporting requirement.¹⁵⁷ In addition, we received a number of comments from small business callers that argued that access to reassigned numbers database should be affordable.¹⁵⁸ None of the other commenters identified any areas where small businesses would incur a particular hardship in complying with the rules.

6. *Delayed Requirements for Smaller Providers.* While we decline to exclude small providers from the *Second Report and Order's* reporting requirements, we will permit providers with 100,000 or fewer subscriber lines as reported on their most recent Forms 477, aggregated over all the providers' affiliates, six additional months to begin maintaining and reporting data to the Administrator. The Commission has used this threshold with regard to other recordkeeping, retention, and reporting requirements, including in the Rural Call Completion Order.¹⁵⁹ A limited extension of time is appropriate for these providers because they have limited staffing resources and may require additional time to make any necessary system changes to track and report permanent disconnections.¹⁶⁰ We direct the Consumer and Governmental Affairs Bureau to separately announce the effective dates for smaller reporting providers when it announces the effective dates for larger reporting providers. We do not anticipate that this minimal delay will compromise the accuracy and comprehensiveness of the database so significantly as to outweigh the burdens on these providers, which we believe are likely to be most disproportionately impacted by these recordkeeping, retention, and reporting requirements.

¹⁵³ See *Second Report and Order*, Section III. E.

¹⁵⁴ NTCA-The Rural Broadband Association *Second Further Notice* Comments at 10 (NTCA).

¹⁵⁵ *Id.* at 11-12.

¹⁵⁶ American Cable Association *Second Further Notice* Comments at 3; Alarm Industry Communications Committee *Second Further Notice* Reply Comments at 4-5 (AICC); California and Nevada Credit Union Leagues *Second Further Notice* Comments at 3 (CNCUL); Edison Electric Institute *Second Further Notice* Comments at 14 (EEI); Credit Union National Association *Second Further Notice* Comments at 3-4 (CUNA); National Retail Federation *Second Further Notice* Comments at 14 (NRF).

¹⁵⁷ American Cable Association *Second Further Notice* Comments at 3.

¹⁵⁸ Alarm Industry Communications Committee *Second Further Notice* Reply Comments at 4-5; California and Nevada Credit Union Leagues *Second Further Notice* Comments at 3; Edison Electric Institute *Second Further Notice* Comments at 14; Credit Union National Association *Second Further Notice* Comments at 3-4; National Retail Federation *Second Further Notice* Comments at 14.

¹⁵⁹ See *Rural Call Completion*, WC Docket No. 13-39, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 16154, 16168, para. 27 (2013) (*Rural Call Completion Order*); see also *Restoring Internet Freedom*, WC Docket No. 17-108, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311, 622, para. 173 (2018); *Technology Transitions*, Order, WC Docket No. 13-3, 31 FCC Rcd 8283, 8323, para. 111 (2016).

¹⁶⁰ See American Cable Association *Second Further Notice* Comments at 11-12 (stating that most of its small provider members have fewer than ten employees and limited resources).

(continued....)

7. *Cost for Callers to Use the Reassigned Numbers Database.* We agree with commenters in the proceeding that access to the reassigned numbers database should be affordable, and have structured the database accordingly.¹⁶¹ The information collected is minimal: a telephone number and the most recent permanent disconnection.¹⁶² This reduces the cost of the database by minimizing the complexity and size of the database, minimizing the types of inquiries the Administrator must facilitate, and minimizing the volume of data that must be supplied in response to queries.¹⁶³ We have also asked the North American Numbering Council (Council) to draw upon its expertise with other numbering databases to take an economically and technically reasonable approach to meeting the requirements we have established to consider how to structure fees and the amount of such fees.¹⁶⁴ We agree that the cost of this database could be materially lower than some databases callers currently use.¹⁶⁵

C. Response to Comments by the Chief Counsel for Advocacy of the Small Business Administration

8. Pursuant to the Small Business Jobs Act of 2010, which amended the RFA, the Commission is required to respond to any comments filed by the Chief Counsel for Advocacy of the Small Business Administration (SBA), and to provide a detailed statement of any change made to the proposed rules as a result of those comments.¹⁶⁶ The Chief Counsel did not file any comments in response to the proposed rules in this proceeding.

D. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

9. The RFA directs agencies to provide a description of, and where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted.¹⁶⁷ The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”¹⁶⁸ In addition, the term “small business” has the same meaning as the term “small-business concern” under the Small Business Act.¹⁶⁹ A “small-business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.¹⁷⁰

10. The recovery of costs by reporting carriers from callers that use the reassigned numbers database apply to a wide range of entities, including potentially all entities that use the telephone to advertise. Thus, we expect that the costs associated with the voluntary usage of the reassigned numbers database could have a significant economic impact on a substantial number of small entities. For

¹⁶¹ See *Second Report and Order*, Section III. E.(discussion of costs and benefits).

¹⁶² See *Second Report and Order*, para. 35.

¹⁶³ See *Second Report and Order*, para. 36.

¹⁶⁴ See *Second Report and Order*, Section III. F.

¹⁶⁵ Comcast *Second Further Notice Reply Comments* at 10.

¹⁶⁶ 5 U.S.C. sec 604 (a)(3).

¹⁶⁷ See 5 U.S.C. § 603(b)(3).

¹⁶⁸ See 5 U.S.C. § 601(6).

¹⁶⁹ See 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.”

¹⁷⁰ See 15 U.S.C. § 632.

(continued....)

instance, funeral homes, mortgage brokers, automobile dealers, newspapers and telecommunications companies could all be affected.

11. In 2013, there were approximately 28.8 million small business firms in the United States, according to SBA data.¹⁷¹ Determining a precise number of small entities that would be subject to fees to use the reassigned numbers database is not readily feasible.

1. Wireline Carriers

12. *Wired Telecommunications Carriers.* The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁷² The SBA has developed a small business size standard for Wired Telecommunications Carriers, which consists of all such companies having 1,500 or fewer employees.¹⁷³ Census data for 2012 shows that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁷⁴ Thus, under this size standard, the majority of firms in this industry can be considered small.

13. *Local Exchange Carriers (LECs).* Neither the Commission nor the SBA has developed a small business size standard specifically for local exchange services. The closest applicable size standard under SBA rules is for the category Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁷⁵ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁷⁶ Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000

¹⁷¹ See Small Business Administration, Office of Advocacy Pamphlet at page 1 (June 2016); https://www.sba.gov/sites/default/files/advocacy/SB-FAQ-2016_WEB.pdf.

¹⁷² U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁷³ See 13 CFR § 120.201, NAICS Code 517110.

¹⁷⁴ 2012 U.S. Economic Census, NAICS Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodTtype=table.

¹⁷⁵ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁷⁶ 13 CFR § 121.201, NAICS code 517110.

(continued....)

employees.¹⁷⁷ Consequently, the Commission estimates that most providers of local exchange service are small businesses.

14. *Incumbent Local Exchange Carriers (Incumbent LECs)*. Neither the Commission nor the SBA has developed a small business size standard specifically for incumbent local exchange services. The closest applicable size standard under SBA rules is for the category Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁷⁸ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁷⁹ Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁸⁰ Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses.

15. *Competitive Local Exchange Carriers (Competitive LECs), Competitive Access Providers (CAPs), Shared-Tenant Service Providers, and Other Local Service Providers*. Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁸¹ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁸² Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁸³ Consequently, the Commission estimates that

¹⁷⁷ 2012 U.S. Economic Census, NAICs Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodTpe=table.

¹⁷⁸ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁷⁹ 13 CFR § 121.201, NAICS code 517110.

¹⁸⁰ 2012 U.S. Economic Census, NAICs Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodTpe=table.

¹⁸¹ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁸² 13 CFR § 121.201, NAICS code 517110.

¹⁸³ 2012 U.S. Economic Census, NAICs Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodTpe=table.

(continued....)

most providers of competitive local exchange service, competitive access providers, shared-tenant service providers, and other local service providers are small entities.

16. We have included small incumbent LECs in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”¹⁸⁴ The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.¹⁸⁵ We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

17. *Interexchange Carriers*. Neither the Commission nor the SBA has developed a small business size standard specifically for providers of interexchange services. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁸⁶ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁸⁷ Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁸⁸ Consequently, the Commission estimates that the majority of interexchange carriers are small entities.

18. *Cable System Operators (Telecom Act Standard)*. The Communications Act also contains a size standard for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”¹⁸⁹ There are approximately 52,403,705 cable video subscribers in the United States today.¹⁹⁰ Accordingly, an operator serving fewer than 524,037 subscribers shall be deemed a small operator if its annual revenues, when combined with the total annual revenues of all its affiliates, do not

¹⁸⁴ 5 U.S.C. § 601(3).

¹⁸⁵ Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, Federal Communications Commission (May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 CFR § 121.102(b).

¹⁸⁶ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁸⁷ 13 CFR § 121.201, NAICS code 517110.

¹⁸⁸ 2012 U.S. Economic Census, NAICS Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodTtype=table.

¹⁸⁹ 47 CFR § 76.901 (f) and notes ff. 1, 2, and 3.

¹⁹⁰ See SNL KAGAN at www.snl.com/interactivex/MultichannelIndustryBenchmarks.aspx.

(continued....)

exceed \$250 million in the aggregate.¹⁹¹ Based on available data, we find that all but nine incumbent cable operators are small entities under this size standard.¹⁹² We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million.¹⁹³ Although it seems certain that some of these cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million, we are unable at this time to estimate with greater precision the number of cable system operators that would qualify as small cable operators under the definition in the Communications Act.

19. *Other Toll Carriers.* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to other toll carriers. This category includes toll carriers that do not fall within the categories of interexchange carriers, operator service providers, prepaid calling card providers, satellite service carriers, or toll resellers. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. The U.S. Census Bureau defines this industry as “establishments primarily engaged in operating and/or providing access to transmission facilities and infrastructure that they own and/or lease for the transmission of voice, data, text, sound, and video using wired communications networks. Transmission facilities may be based on a single technology or a combination of technologies. Establishments in this industry use the wired telecommunications network facilities that they operate to provide a variety of services, such as wired telephony services, including VoIP services, wired (cable) audio and video programming distribution, and wired broadband internet services. By exception, establishments providing satellite television distribution services using facilities and infrastructure that they operate are included in this industry.”¹⁹⁴ Under that size standard, such a business is small if it has 1,500 or fewer employees.¹⁹⁵ Census data for 2012 show that there were 3,117 firms that operated that year. Of this total, 3,083 operated with fewer than 1,000 employees.¹⁹⁶ Thus, under this category and the associated small business size standard, the majority of other toll carriers can be considered small.

2. Wireless Carriers

20. *Wireless Telecommunications Carriers (except Satellite).* Since 2007, the Census Bureau has placed wireless firms within this new, broad, economic census category.¹⁹⁷ Under the present and prior categories, the SBA has deemed a wireless business to be small if it has 1,500 or fewer employees.¹⁹⁸ For the category of Wireless Telecommunications Carriers (except Satellite), Census data for 2012 show that there were 967 firms that operated for the entire year. Of this total, 955 firms had

¹⁹¹ 47 CFR § 76.901(f) and notes ff. 1, 2, and 3.

¹⁹² See SNL KAGAN at <https://www.snl.com/Interactivex/TopCableMSOs.aspx>.

¹⁹³ The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to Section 76.901(f) of the Commission’s rules. See 47 CFR § 76.901(f).

¹⁹⁴ U.S. Census Bureau, 2012 NAICS Definitions, “517110 Wired Telecommunications Categories”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch>.

¹⁹⁵ 13 CFR § 121.201, NAICS code 517110.

¹⁹⁶ 2012 U.S. Economic Census, NAICS Code 517110, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodType=table.

¹⁹⁷ U.S. Census Bureau, 2012 NAICS Definitions, “517210 Wireless Telecommunications Categories (Except Satellite)”; <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517210&search=2012%20NAICS%20Search>.

¹⁹⁸ 13 CFR § 121.201, NAICS code 517210 (2012 NAICS). The now-superseded, pre-2007 CFR citations were 13 CFR § 121.201, NAICS codes 517211 and 517212 (referring to the 2002 NAICS).

(continued....)

fewer than 1,000 employees.¹⁹⁹ Thus under this category and the associated size standard, the Commission estimates that the majority of wireless telecommunications carriers (except satellite) are small entities. Similarly, according to internally developed Commission data, 413 carriers reported that they were engaged in the provision of wireless telephony, including cellular service, Personal Communications Service (PCS), and Specialized Mobile Radio (SMR) services.²⁰⁰ Of this total, an estimated 261 have 1,500 or fewer employees.²⁰¹ Thus, using available data, we estimate that the majority of wireless firms can be considered small.

21. *Satellite Telecommunications Providers.* The category of Satellite Telecommunications “comprises establishments primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”²⁰² This category has a small business size standard of \$32.5 million or less in average annual receipts, under SBA rules.²⁰³ For this category, Census Bureau data for 2012 show that there were a total of 333 firms that operated for the entire year.²⁰⁴ Of this total, 299 firms had annual receipts of under \$25 million.²⁰⁵ Consequently, we estimate that the majority of satellite telecommunications firms are small entities.

22. *All Other Telecommunications.* All other telecommunications comprises, *inter alia*, “establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Establishments providing Internet services or voice over Internet protocol services via client-supplied telecommunications connections are also included in this industry.”²⁰⁶ The SBA has developed a small business size standard for the category of All Other Telecommunications.²⁰⁷ Under that size standard, such a business is small if it has \$32.5 million in annual receipts.²⁰⁸ For this category, Census Bureau data for 2012 show that there were a total of 1,442 firms that operated for the entire year.²⁰⁹ Of this total, 1,400 had annual receipts below \$25 million per

¹⁹⁹ 2012 U.S. Economic Census, NAICS Code 517210, at http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ5&prodType=table.

²⁰⁰ *Trends in Telephone Service*, tbl. 5.3.

²⁰¹ *Id.*

²⁰² U.S. Census Bureau, 2012 NAICS Definitions, “517410 Satellite Telecommunications,” <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517410&search=2012>.

²⁰³ 13 CFR § 121.201, NAICS Code 517410.

²⁰⁴ U.S. Census Bureau, 2012 Economic Census, Subject Series: Information, “Establishment and Firm Size,” NAICS code 517410.

²⁰⁵ *Id.*

²⁰⁶ U.S. Census Bureau, 2012 NAICS Definitions, “517919 All Other Telecommunications,” <http://www.census.gov/cgi-bin/sssd/naics/naicsrch?code=517919&search=2012>.

²⁰⁷ 13 CFR § 121.201, NAICS code 517919.

²⁰⁸ *Id.*

²⁰⁹ U.S. Census Bureau, 2012 Economic Census, Subject Series: Information, “Establishment and Firm Size,” NAICS code 517919.

(continued....)

year.²¹⁰ Consequently, we estimate that the majority of all other telecommunications firms are small entities.

3. Resellers

23. *Toll Resellers.* The Commission has not developed a definition for toll resellers. The closest NAICS Code Category is Telecommunications Resellers and therefore the associated definition and data for Telecommunications Resellers has been used for toll resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. Mobile virtual network operators (MVNOs) are included in this industry.²¹¹ The SBA has developed a small business size standard for the category of Telecommunications Resellers.²¹² Under that size standard, such a business is small if it has 1,500 or fewer employees.²¹³ Census data for 2012 show that 1,341 firms provided resale services during that year. Of that number, 1,341 operated with fewer than 1,000 employees.²¹⁴ Thus, under this category and the associated small business size standard, the majority of these resellers can be considered small entities. According to Commission data, 881 carriers have reported that they are engaged in the provision of toll resale services.²¹⁵ Of this total, an estimated 857 have 1,500 or fewer employees.²¹⁶ Consequently, the Commission estimates that the majority of toll resellers are small entities.

24. *Local Resellers.* The Commission has not developed a definition for local resellers. The closest NAICS Code Category is Telecommunications Resellers and therefore the associated definition and data for Telecommunications Resellers has been used for local resellers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. MVNOs are included in this industry.²¹⁷ The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²¹⁸ Census data for 2012 show that 1,341 firms provided resale services during that year. Of that number, all operated with fewer than 1,000 employees.²¹⁹ Thus, under this category

²¹⁰ *Id.*

²¹¹ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012>.

²¹² 13 CFR § 121.201, NAICS code 517911.

²¹³ *Id.*

²¹⁴ 2012 U.S. Economic Census, NAICS Code 517911, at https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ECN_2012_US_51SSSZ2&prodType=table.

²¹⁵ *Trends in Telephone Service*, at tbl. 5.3.

²¹⁶ *Id.*

²¹⁷ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012>.

²¹⁸ 13 CFR § 121.201, NAICS code 517911.

²¹⁹ U.S. Census Bureau, 2012 Economic Census, Subject Series: Information, “Establishment and Firm Size,” NAICS code 517911.

(continued....)

and the associated small business size standard, the majority of these local resellers can be considered small entities.

25. *Prepaid Calling Card Providers.* The Commission has not developed a definition for prepaid calling card providers. The closest NAICS Code Category is Telecommunications Resellers and therefore the associated definition and data for Telecommunications Resellers has been used for prepaid calling card providers. The Telecommunications Resellers industry comprises establishments engaged in purchasing access and network capacity from owners and operators of telecommunications networks and reselling wired and wireless telecommunications services (except satellite) to businesses and households. Establishments in this industry resell telecommunications; they do not operate transmission facilities and infrastructure. MVNOs are included in this industry.²²⁰ The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.²²¹ Census data for 2012 show that 1,341 firms provided resale services during that year. Of that number, all operated with fewer than 1,000 employees.²²² Thus, under this category and the associated small business size standard, the majority of these prepaid calling card providers can be considered small entities.

E. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements

26. *Reporting Requirements.* This *Second Report and Order* adopts rules to require the Toll Free Numbering Administrator²²³ and all reporting carriers as defined in our numbering rules,²²⁴ to report information on a monthly basis to a database whereby a caller can determine whether a number has been permanently disconnected since a date provided by the caller. With the exception of delayed implementation for reporting carriers with 100,000 or fewer lines,²²⁵ these changes affect small and large companies equally, and apply equally to all of the classes of regulated entities identified above. All providers, including those with 100,000 lines or fewer, are already required to report number usage information to the NANPA, albeit on a less frequent basis.²²⁶ As with other providers, the burden of compiling and reporting the date of permanent disconnection for NANP numbers each month is incremental and small compared to the overall reporting requirements. We do not believe that this incremental burden is so significant as to outweigh the need for accurate and comprehensive data, nor do we believe that the monthly reporting is overly onerous, as it is not likely to require providers with

²²⁰ <https://www.census.gov/cgi-bin/sssd/naics/naicsrch?input=517911&search=2012+NAICS+Search&search=2012>.

²²¹ 13 CFR § 121.201, NAICS code 517911.

²²² U.S. Census Bureau, 2012 Economic Census, Subject Series: Information, “Establishment and Firm Size,” NAICS code 517911.

²²³ See generally 47 C.F.R. Part 52, Subpart D – Toll Free Numbers. The Toll Free Numbering Administrator is Somos, Inc.

²²⁴ For the purposes of this *Second Report and Order* “a ‘reporting carrier’ is “a telecommunications carrier that receives numbering resources from the NANPA, a Pooling Administrator or another telecommunications carrier,” which includes interconnected VoIP providers that directly obtain numbering resources pursuant to Commission authorization. 47 C.F.R. § 52.15(f)(2); see also *Numbering Policies for Modern Communications et al.*, Report and Order, 30 FCC Rcd 6839, 6849-50, para. 24 (2015) (imposing number utilization and reporting requirements directly on interconnected VoIP providers).

²²⁵ We provide additional time for small providers to track permanent disconnections in their records and begin reporting to the Administrator. See *Second Report and Order*, para. 44.

²²⁶ See 47 CFR § 52.15(f)(5).

(continued...)

100,000 lines or fewer to implement new billing systems or otherwise to incur substantial additional costs.²²⁷

27. *Database Requirements.* The *Second Report and Order* requires the Toll Free Numbering Administrator and providers that receive North American Numbering Plan numbers to report on a monthly basis information to a database whereby a caller can determine whether a number has been permanently disconnected since a date provided by the caller²²⁸ The database will be available only to callers who agree in writing that the caller (and any agent acting on behalf of the caller) will use the database solely to determine whether a number has been permanently disconnected since a date provided by the caller for the purpose of making lawful calls or sending lawful texts. The Administrator will obtain this certification from each new user during the enrollment process and before allowing a new user to access the database.

28. Finally, we take steps to promote the accessibility of the database to the widest array of possible users. Recognizing that callers of all sizes and levels of sophistication may choose to use the database, we require the database to offer the ability to process low-volume queries (*e.g.*, via a website interface), as well as to support high-volume queries (*e.g.*, via batch process and/or standardized application programming interfaces or other protocols). This, for example, will enable both a small medical office that texts appointment reminders to patients and a business that operates a large outbound call center to each use the database in a manner that is effective and efficient for its respective calling operations. In addition, some callers might use a third-party contractor to scrub their calling lists or to provide the capability to place autodialed or prerecorded or artificial voice calls. In order to promote the effectiveness of the database, it must be possible for these third-party contractors to use it as the agent of their client callers.

29. *Minimum Aging Period.* The *Second Report and Order* modifies Sections 52.15(f)(1)(ii) and 52.103(d) of the Commission's rules²²⁹ as set forth in Appendix A to establish a minimum aging period of 45 days for all aging numbers.²³⁰ Thus, neither a toll-free number nor a U.S. NANP geographic number may be reassigned until at least 45 days after the date it was permanently disconnected.²³¹

F. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered

30. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.²³²

31. The Commission considered feedback from the *Second Further Notice* in crafting the final order. We evaluated the comments in light of balancing the goals of protecting consumers from unwanted calls, providing callers the necessary information to avoid inadvertently calling numbers that have been reassigned, and minimizing the burden on reporting carriers. While we considered a number of

²²⁷ See, *e.g.*, American Cable Association *Second Further Notice* Comments at 7; American Cable Association *Second Further Notice* Reply Comments at 11-12.

²²⁸ See *Second Report and Order*, Section III. A.

²²⁹ 47 CFR § 52.15(f)(1)(ii).

²³⁰ See *Second Report and Order*, Section III. A.

²³¹ *Id.*

²³² 5 U.S.C. § 603(c).

mandatory reporting and compliance requirements, we sought to minimize any significant economic impact on small business concerns. Based on our statutorily mandated obligation to take steps that will minimize any significant and adverse economic impact of our rules adopted herein, we have accordingly conferred upon small businesses certain benefits which will enable those businesses to reduce the costs of compliance with our new rules and will otherwise tend to reduce any burdens that small businesses may encounter in complying with those rules.

32. *Delayed Requirements for Smaller Providers.* We will permit providers with 100,000 or fewer subscriber lines as reported on their most recent Forms 477, aggregated over all the providers' affiliates, six additional months for them to begin maintaining and reporting data to the Administrator. The Commission has used this threshold with regard to other recordkeeping, retention, and reporting requirements, including in the Rural Call Completion Order.²³³ A limited extension of time is appropriate for these providers because they have limited staffing resources and may require additional time to make any necessary system changes to track and report permanent disconnections.²³⁴ We direct the Consumer and Governmental Affairs Bureau to separately announce the effective dates for smaller reporting providers when it announces the effective dates for larger reporting providers.

33. *Recordkeeping by Providers.* We disagree with commenters seeking to impose a retroactive requirement on reporting providers for seven or ten years' worth of data.²³⁵ Because reporting providers have not previously been required to track or retain this data, compliance with such a requirement would be impossible for many reporting providers. Further, given the quantity of the data involved and the potential need to recreate data not retained in this form, we find such an approach to be overly burdensome.²³⁶

34. *Reporting Frequency.* We require providers to report to the Administrator data on the 15th day of each month.²³⁷ We believe that monthly reporting properly balances the burden placed on providers with the need for callers to obtain timely information. We concluded that alternatives, such as requiring real-time reporting, could impose disproportionate costs on small businesses and could be technically difficult to accomplish.²³⁸ As with other providers, the burden of compiling and reporting the date of permanent disconnection for NANP numbers each month is incremental and small compared to the overall reporting requirements. We do not believe that this incremental burden is so significant as to outweigh the need for accurate and comprehensive data, nor do we believe that the monthly reporting is overly onerous, as it is not likely to effect small providers.

35. *Database Access Fees for Callers.* We agree with commenters in the proceeding that

²³³ See *Rural Call Completion*, WC Docket No. 13-39, Report and Order and Further Notice of Proposed Rulemaking, 28 FCC Rcd 16154, 16168, para. 27 (2013) (*Rural Call Completion Order*); see also *Restoring Internet Freedom*, WC Docket No. 17-108, Declaratory Ruling, Report and Order, and Order, 33 FCC Rcd 311, 622, para. 173 (2018); *Technology Transitions*, Order, WC Docket No. 13-3, 31 FCC Rcd 8283, 8323, para. 111 (2016).

²³⁴ See American Cable Association *Second Further Notice* Comments at 11-12 (stating that most of its small provider members have fewer than ten employees and limited resources).

²³⁵ See, e.g., AFSA *Second Further Notice* Comments at 3 (seeking seven to ten years of data prior to the creation of the database); CMA *Second Further Notice* Comments at Addendum, 3; NAFICU *Second Further Notice* Comments at 3.

²³⁶ See, e.g., CCU *Second Further Notice* Comments at 1 (arguing that data should be from inception of the database because of the large volume); Tatango *Second Further Notice* Comments at 13.

²³⁷ See *Second Report and Order*, paras. 39-40.

²³⁸ *Id.*

(continued....)

access to the reassigned numbers database should be affordable,²³⁹ and have structured the database accordingly. The information collected is minimal: a telephone number and the most recent permanent disconnection.²⁴⁰ This reduces the cost of the database by minimizing the complexity and size of the database, minimizing the types of inquiries the Administrator must facilitate, and minimizing the volume of data that must be supplied in response to queries.²⁴¹

G. Report to Congress

36. The Commission will send a copy of the *Second Report and Order*, including this FRFA, in a report to be sent to Congress and the Government Accountability Office pursuant to the Congressional Review Act.²⁴² In addition, the Commission will send a copy of the *Second Report and Order*, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of the *Second Report and Order* (or summaries thereof) will also be published in the Federal Register.²⁴³

²³⁹ Alarm Industry Communications Committee *Second Further Notice Reply Comments* at 4-5; California and Nevada Credit Union Leagues *Second Further Notice Comments* at 3; Edison Electric Institute *Second Further Notice Comments* at 14; Credit Union National Association *Second Further Notice Comments* at 3-4; National Retail Federation *Second Further Notice Comments* at 14.

²⁴⁰ See *Second Report and Order*, para. 35.

²⁴¹ See *Second Report and Order*, para. 36.

²⁴² 5 U.S.C. § 801(a)(1)(A).

²⁴³ See *id.* § 604(b).