Cox Communications, Inc. (“Cox”), by its attorneys, hereby submits its comments on the Technology Transitions Policy Task Force public notice concerning potential trials relating to technology transitions in the telephone network.⁠¹ These comments focus, in particular, on trials relating to the transition from time-division multiplexing (“TDM”) to Internet protocol (“IP”) as the dominant transmission protocols for voice services. As shown below, Cox supports trials that focus on technological and operational process issues, as those types of trials are most likely to be useful in identifying how to move forward as providers evolve various elements of their networks over time. However, the trials should not be used as a forum for addressing any legal or regulatory issues, because the trials will not be able to necessarily expose elements of market power and any effort to revisit the current interconnection framework is best handled through the Commission’s traditional rulemaking process.

I. Introduction

Cox is one of the pioneers in competitive telecommunication services, entering the voice service marketplace in 1997. Cox’s services initially were provided to customers using TDM technology, but Cox’s network has evolved and it now increasingly provides voice services via

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IP. As a practical matter, Cox does not generally distinguish between its TDM and IP retail voice services, offering them both under the brand name “Cox Digital Telephone,” under the same terms and conditions and with the same commitments to service quality. Cox’s operation of TDM and IP voice services in tandem has given it significant insight into the similarities and differences of the two technologies for the transmission of voice services over TDM and IP networks.

Cox believes that voluntary trials concerning the technical aspects of the TDM to IP transition can be useful to the Commission and the industry if those trials are focused on what trials do best, which is to illuminate practical issues, both in terms of technology and business processes for implementing interconnection, next generation 911 and other goals the Commission identified in the Public Notice. What trials cannot do is modify the underlying regulatory framework that applies to specific services and interconnection, because those issues are subject to existing, specific legal requirements and other policy considerations. However, so long as any trials are focused on technology and operational processes and are designed to provide transparent results, they may provide useful information that can inform the approach taken by the Commission going forward.

II. Any Trials Should Focus First on Technology and Operational Processes.

While IP-enabled technology and equipment are widely available today, in practice there are only limited instances of large-scale IP-based interconnection for traffic exchange between service providers at the local level. There also is limited experience with IP-enabled technology in other areas where the Commission is considering trials, from next generation 911 to

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2 As Cox has discussed in other filings, there already is a legal framework under the Communications Act of 1934, as amended (the “Act”), for interconnection, and it is important for the Commission to uphold that framework to ensure that interconnection is available to service providers on appropriate terms and conditions. See, e.g., Comments of Cox, GN Docket No. 12-353 (Jan. 28, 2013) at 9-11 (“Cox AT&T and NTCA Petition Comments”); Reply Comments of Cox, WC Docket No. 10-90 et al. (Mar. 30, 2012) at 9-10.
numbering and portability. Further, experience with traditional Internet peering does not provide much assistance in evaluating IP-based interconnection for voice service; voice interconnection is qualitatively different.\(^3\) The lack of direct experience means that there is value in testing the next generation architecture, methods and processes for implementing IP interconnection more widely to ensure quality-controlled voice services over what began as and still functions as the Public Switched Telephone Network.

The central issue in any trial is determining how best to ensure that the interconnected networks will work smoothly, not just for all-IP environments, but also in mixed TDM and IP environments, which are likely to persist for many years. Key elements of any trial will include cooperative sharing of information related to technical matters, such as network interoperability and reliable, transparent and reciprocal traffic exchange through IP-to-IP points of interconnection, as well as associated processes like transmission of signaling data and determining the sizing of interconnection facilities. Number portability and next generation 911 operations also need to be considered through trial processes, as they will interact with IP-based call transmission.

Further, any trial should address both the short term and the long term. In the foreseeable future, legacy TDM technology will coexist with IP technology, both in connections between networks and within the networks themselves.\(^4\) In the long term, all-IP networks will become prevalent and there will be minimal need to accommodate TDM-based providers. It is clear, though, that not just the technological requirements for interconnection will be different in these two environments; implementation processes are likely to differ as well.

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\(^3\) See, \textit{e.g.}, Cox AT&T and NTCA Petition Comments at 13.

\(^4\) Indeed, the large incumbent LECs all operate mixed IP/TDM networks, and are likely to do so for many years.
The Commission’s number portability experience, in particular, shows that developing appropriate processes is at least as important as developing technologies. The number portability process flows developed through the North American Numbering Council were critical to actual implementation of number portability because they defined the interaction between carriers.\textsuperscript{5} Like local number portability, interconnection also requires carrier cooperation in setting up physical points of interconnection; in communicating via signaling to set up, transmit and tear down calls; and in myriad other ways. Thus, even if the technological issues are addressed quickly, there still will be work to be done in the trials.

The Commission also should ensure that the scope of any trial is circumscribed to minimize the effect on customers if any unexpected events disrupt interconnection or traffic flow.\textsuperscript{6} One of the important purposes of trials is to find out what approaches will enhance reliability and service quality and what approaches will not produce acceptable service. Because it is likely that some approaches will not provide the service quality expected by voice customers today, it is important to limit the number of customers that can be affected by faults that occur during the trials. The only way to do this is to make the trials voluntary, as the Commission has suggested, and to limit the scope of individual trials to limit the potentially negative customer impacts.

\textbf{III. The Commission Should Not Use Trials as a Forum for Legal or Regulatory Reform.}

Experience shows that trials are very helpful in determining appropriate technical parameters and addressing implementation issues for new technologies. The Commission has

\footnote{Telephone Number Portability, Second Report and Order, 12 FCC Red 12281, 12316 (1997) (adopting process flows for number portability requests).}

\footnote{The Commission may want to consider whether early trials should take place in “walled garden” environments in which no actual customer traffic is exchanged.}
used different types of trials in various contexts to achieve these goals.\textsuperscript{7} Trials cannot, however, be used to evaluate the legal and regulatory requirements already established by statute as the Commission considers how to foster the transition to an all-IP network. Such requirements are better considered in rulemakings, which provide stakeholders opportunities to vet broader policy and legal concerns than can be addressed by narrow trials.

In the context of interconnection, the existing statute and the regulatory requirements that flow from it are technology neutral and must be applied to interconnection regardless of the technology used. Any changes or relaxation of such requirements must be pursued through the Commission’s rulemaking process or, if appropriate, through the forbearance process. The Act and current regulations appropriately reflect the market power of the incumbent providers with respect to interconnection and critical network facilities and cannot be adjusted through a limited-scope trial of technology and processes.

A trial, therefore, cannot produce any insight into the foundational concerns remedied by the Act and the current regulatory framework for interconnection because a trial is an artificial environment that cannot reflect the inequities in market power. Knowledge that a trial is intended to address these particular regulatory issues would give participating parties significant incentives to manipulate events to achieve desired regulatory results. Parties with significant negotiating power would choose not to exercise that power during the trial process so as to convince regulators that there is no need to limit their ability to impose favorable terms and conditions during later negotiations. This likely potential for a false positive result in the narrow

\textsuperscript{7} See, e.g., Telephone Number Portability, First Report and Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd 8352, 8365, 8412 (describing and relying on state trials for technical matters) ("Number Portability First Report and Order"). Similarly, the Advanced Television Systems Committee conducted tests that informed Commission decisions about what technology to adopt for digital television, and the Commission conducted a trial of the transition from analog to digital signals in Wilmington, North Carolina before the full transition began. See “DTV Transition Premiers in Wilmington, North Carolina,” News Release, May 8, 2008.
context of a trial would not assist the Commission in understanding the real life application of
the current regulatory framework for interconnection – which remains fully applicable regardless
of the underlying technology – to IP-based interconnection.8

Once again, the Commission’s approach to number portability provides a useful model.
The Commission used the trials and analysis to determine the technical approach to adopt for
number portability, but in setting the terms of the portability mandate, it looked to the
requirements of the Act.9 Similarly, the Commission did not use the trial process to address
issues like cost recovery that were not technical in nature, but instead looked to underlying legal
and policy considerations to decide those questions.10

There is no reason to apply a different regulatory model to the transition to IP
interconnection or, for that matter, to any of the other trials discussed in the Public Notice and
avoid disruption of the underlying regulatory framework. Instead, the Commission should
recognize the practical limits on what can be achieved in trials. That will allow the Commission
to use the trial process to focus on questions that trials actually can answer – how to make the
technology transition work efficiently. Legal and policy considerations should be addressed
through the Commission’s existing docketed proceedings and the implementation of existing
law. That approach is the best way to accelerate the implementation of a forward-looking
interconnection regime that will benefit the public interest.

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8 Further, voluntary trials should be under terms and conditions that are agreed to by all of the parties and that are
limited to the trials. Variations from the terms and conditions of existing interconnection agreements for the
purpose of any trials should apply only to the trials, not to subsequent permanent interconnection arrangements.
9 Number Portability First Report and Order, 11 FCC Rcd at 8393-7.
10 Id. at 8412.
IV. Conclusion

For all of these reasons, the Commission should act in this proceeding in accordance with these comments.

Respectfully submitted,

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Certificate of Service

I, Cynthia Porter-Graham, certify that on this 8th day of July, 2013, I caused a copy of the foregoing Comments of Cox Communications, Inc. to be served on the following by hand delivery:

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