Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	WC Docket No. 13-39
Rural Call Completion	)	

COMMENTS OF THE PUBLIC SERVICE COMMISSION OF WISCONSIN

By its Notice of Proposed Rulemaking released on February 7, 2013, the Federal Communications Commission (Commission) seeks input on potential resolutions "to help address problems in the completion of long-distance telephone calls to rural customers." These rural call completion problems are a pressing concern for Wisconsin's rural local exchange carriers, businesses and residents. Many are suffering real harm, both fiscal and non-fiscal, by being subject to calls that cannot be completed, or that have such low quality that communication is impossible. The Public Service Commission of Wisconsin (PSCW) applauds the Commission for being responsive to concerns raised by consumers, providers and many state commissions, on the actions it has taken in other dockets on this subject, and on the initiation of the rulemaking in this docket. The PSCW appreciates the opportunity to comment on the proposed rules and to suggest some additional considerations.

As much as the PSCW supports the data gathering effort (with some recommended modifications), the PSCW is very concerned about the ongoing, real-time impacts of rural call completion. Part I of these comments reiterates the seriousness of the problem as experienced in Wisconsin. Part II outlines the PSCW's suggestions for some improvement and additions to the data collection proposals. Part III recommends implementation of certain low-cost disclosure

requirements for intermediate carriers that can drive immediate and substantial mitigation, if not full cure, of some of the rural call completion problem.

Part I

Wisconsin is home to approximately 80 rural incumbent local exchange carriers (RLECs), and almost all of these providers have experienced and documented rural call completion problems. These problems have had a severe financial effect on the RLECs, and that impact goes well beyond the lost access revenue from calls that did not complete or were of so low quality that the caller abandoned the call after a few words.

Rural businesses are harmed when they cannot receive calls from customers or providers. The RLECs generally have good relations with their business customers, and most customers are willing to work with the provider to find a solution. However, when that solution does not appear – and the RLECs have been struggling with this problem for several years now – those business customers often convert to what they perceive as "more reliable" options, such as cellular. Over the past several years, many Wisconsin RLECs upgraded their facilities, diversified into data and video provisioning, and developed viable business plans despite serving high-cost areas. This chronic call completion problem, however, threatens that viability. No matter how good the bundle of services provided, voice service remains a core requirement for many rural families and businesses. When voice service does not work, regardless of whether the fault lies with the RLEC, those customers may seek other options.

Although the call completion problem is real and widely-acknowledged, the proposed rules will allow the Commission to better target the issue and potential solutions by gaining valuable information on the nature and extent of these problems

Part II

Proposed Data Collection and Retention Rules

The Commission requested comments on the number of calls that would trigger reporting, and whether certain times or reporting frequencies would mask problems. The PSCW does not have specific enough information to answer those questions. However, it is important to deal with rural call completion issues quickly and effectively, and doing so requires sufficient information. Providers will likely comment on these issues, and the Commission should make use of the information in those filings. In the continued exploration of this issue, the PSCW recommends erring on the side of collecting too much information rather than too little. It serves no one's interest to collect too little data now, only leading to a need to have to go back and collect more data in a future period.

Calls to Toll-Free Numbers

The Commission asked whether calls to toll-free numbers can be excluded from the categories of calls being tracked. The PSCW recommends that such calls not be excluded, for both general and specific reasons. On the general side, a toll-free call, such as a call to an 800 number, is not actually placed to that number. Instead, the provider queries the 800 database to determine that functional number to which the call will be routed. After that, the call is routed in the same manner as any other toll call. When a rural customer buys an 800 number service, those calls are routed to the RLEC and to that business, and may experience the same sorts of problems as any other call.

More specifically, Wisconsin has experienced significant rural call completion issues involving calls placed to 800 numbers. In several cases, customers report receiving calls – or not receiving calls – placed to the 800 numbers they purchase and advertise. When those calls are

received (if received), they are subject to the same sort of quality issues as other long-distance calls. In some cases (including one described below), some call completion issues may even be unique to toll-free numbers. For these reasons, calls to toll-free numbers should not be excluded from data collection.

Short-Duration Calls

Experience indicates that short-duration calls occur for three main reasons. First, the specific party the caller wants to reach is not there, but someone else is and answers the telephone. The second is that the caller is a telemarketer and the called party chooses to hang up. The third reason could be call quality that is so poor that conversation is impossible. Of these three, only the third reason is relevant and worth tracking. If such calls could be reliably identified, it would be worth tracking that type of call. If not, then specifically tracking short-duration calls is probably not worth the effort.

Safe Harbor Proposals

The PSCW supports the idea of safe harbors which would save providers, who are already ensuring that calls to rural areas are going through, the effort and expense of data collection. Overall, the safe harbor proposals appear reasonable. The PSCW sees one area in which clarification might be necessary.

In Wisconsin, a number of RLECs have their own tandems, and their exchanges are listed in the local exchange routing guide (LERG) as subtending those tandems. In Wisconsin's Northwest LATA, AT&T offers terminating service through its Eau Claire tandem, which is interconnected with most of the tandems in that LATA. Many providers deliver calls to the Eau Claire tandem and rely on AT&T to transport those calls to the RLEC tandem and then on to the RLEC exchange. In such a situation, would AT&T be counted as the one allowable

additional intermediate provider? The PSCW is not sure it should be so counted, but is further not certain that it can be excluded without making the definition of intermediate provider quite complex and non-intuitive. Whatever the Commission's intention and final determination on this matter, it should be clearly delineated to avoid potential confusing interpretations.

Part III

Requiring Intermediary Providers to Provide Information on Procedures

The PSCW does not recommend that the Commission regulate the operations of the intermediate providers that offer transport services, since such an approach could reduce options and impair innovation. Market forces generally provide for more efficient "regulation," at lower cost. However, the market can only function efficiently if the customers – in this case the providers purchasing transiting services – have sufficient information to make informed decisions. The PSCW recommends, therefore, that intermediate providers be required to publically provide certain information on their transiting procedures, including information on whether they have implemented software to prevent looping and on the levels of bad packets and call compression or constriction that that transiting provider finds acceptable.

Intermediate providers do not complete calls themselves if they have less expensive alternatives. For example, intermediate provider A may hand off the call to intermediate provider B if B offers to terminate the call at a lower price than A may otherwise incur. Provider B may then hand off the call to provider C, and so forth. These hand-offs are automated, and based on constantly updated tables of prices. However, problems can occur in the call chain if, for instance, Provider C's routing table would hand the call off to Provider A. This can cause an endless loop in which the call is handed from A to B to C and back to A, resulting in a call that never terminates. This can be prevented if the providers implement some simple software to

identify and terminate such loops. Such software exists, although running it does involve a real, though small, cost. Since least cost routing is all about costs, a provider has no incentive to implement the software and every incentive not to. Simply requiring all intermediate providers to state whether they are using such software would not be burdensome on the intermediate providers, but it would allow originating providers to choose whether to use, or avoid, intermediate providers that do not implement such software. It would allow the market to function.

Wisconsin RLECs have identified frequent and repeated problems with FAX transmissions failing when least-cost intermediate providers are involved in the call. Since a FAX machine is, basically, a 9,600 baud modem connected to a scanner, FAX transmissions should work efficiently even with two or more analog-to-digital and digital-to-analog conversions in the transmission path. However, the FAX transmission will fail if, while being transmitted digitally, a high enough portion of packets fail to reach the recipient. Packets are lost due to congestion which may cause packets to be discarded or corrupted, or when providers send only some portion of the packets to conserve bandwidth. The latter (called constriction or compression) is generally done as a cost-saving matter. Whatever the cause, a small portion of packets may be lost. Such small loses may have no effect on perceived call quality when a single provider loses packets, but such losses cascade. If multiple providers are involved in the call, and each fails to transmit a portion of the packets they receive, the result would be exactly the problems with poor voice quality and failed FAX calls that Wisconsin rural customers are experiencing. The PSCW does not suggest that the Commission try to write quality of service requirements for intermediate providers—at least at this time. Simply requiring all providers to

state their minimum acceptable percentage of bad packets and compression policies for sampling packets will allow originating providers to make informed choices.

The PSCW sees no current need for the Commission to heavily regulate the operations of intermediate providers. Simply informing transiting service customers of the quality of service levels will allow the customers to avoid poor performers, and force the providers to either improve or exit the market. To allow the market to perform this service, the PSCW recommends that the Commission require all intermediate providers to publically state whether they have implemented software to prevent call looping, and their maximum acceptable levels of bad packets and bandwidth constriction.

Requiring Intermediate Providers to Identify Other Providers to Which They Transfer Calls

The PSCW does not seek to burden intermediate providers, but originating providers must have adequate information on which to choose providers – including knowledge of which providers may be involved in the route. In many cases, intermediate providers do not provide actual transport over the entire route: each intermediate provider may transfer that call to another provider if that option is cheaper. Wisconsin RLECs have traced call routes and have seen numerous examples of what would appear, absent the price effects, to be highly inefficient routing. In many cases, a large number of intermediate providers appear in the route. The route may be long and complex. In one case, a call from southern Wisconsin to northwest Wisconsin was actually routed to Eastern Europe and then to Singapore before returning to Wisconsin. These routes were not created because of technical efficiency, or because of congestion on the networks. These routes come into being because each provider is trying to reduce costs by choosing the next leg of the route based on the lowest available price. When problems arise, the

originating provider must be able to identify the providers which may handle one or more parts of the call if it is to be able to solve those problems.

An example may serve to illustrate the problem and its ramifications. The PSCW has had extensive contacts with an automobile dealer who has had repeated and ongoing problems with his 800 number. It appears that one or more least-cost routing provider had mis-programmed its routing tables such that all calls placed to the exchange were routed to that dealer's functional number. Despite months of effort by the dealer, the RLEC and some of the originating providers, it was impossible to identify the intermediate provider with the erroneous routing table, and the misdirected calls persisted.

The Commission has proposed requiring originating providers to track, for each call, whether that call is handed off to an intermediate provider. The Commission may wish to consider requiring intermediate providers to do similar tracking of calls that they hand off. That would provide the best method of tracking problems and failed calls. As a fallback, the Commission may wish to consider having intermediate providers track and identify, on request, which other intermediate providers they used during a calendar day. Since the intermediate providers generally have contracts with other providers, or at least a billing relationship, that should not be too burdensome. More importantly, while tracking providers to which they *may* have transferred a given call would not make solving problems like that of the car dealer described above easy, it would at least make it possible. Requiring all intermediate providers to track all call hand offs would be more burdensome, but it would make finding problems like that described above much easier. The Commission should consider what level of tracking should be required of intermediate providers, as well as potential safe harbors, as proposed for originating providers.

Conclusion

As the PSCW has stated before, this problem has been lingering too long. Solutions must be found. The PSCW strongly supports the Commission rulemaking endeavor and appreciates the opportunity to comment on these issues which remain of critical concern to Wisconsin's RLECs and customers alike. The Commission's proposals for data collection and reporting should provide much-needed information on these issues, and the PSCW looks forward to seeing the data that is collected and the solutions that can be developed based on that data.

Dated at Madison, Wisconsin, this 9th day of May, 2013.

By the Commission:

Sandra J. Paske
Secretary to the Commission

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