

**Before the  
CALIFORNIA PUBLIC UTILITIES COMMISSION**

Order Instituting Investigation into the State of Competition Among Telecommunications Providers in California, and to Consider and Resolve Questions raised in the Limited Rehearing of Decision 08-09-042.

Investigation 15-11-007

Rebuttal Testimony

of

**LEE L. SELWYN**

on behalf of the

Office of Ratepayer Advocates  
of the  
California Public Utilities Commission

July 15, 2016

# REBUTTAL TESTIMONY OF LEE L. SELWYN

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## REBUTTAL TESTIMONY

### 1 **Introduction**

2

3 1. I am the same Lee L. Selwyn who submitted testimony in this matter on March 15 and  
4 June 1, 2016 on behalf of the CPUC Office of Ratepayer Advocates in response to the November  
5 5, 2015 Order Instituting Investigation (“OII”).

6

7 2. The purpose of this testimony is to address and respond to several Respondent witnesses’  
8 contentions, as set out in their June 1 submissions, regarding the effectiveness of competition in  
9 disciplining prices and protecting consumers of voice and broadband services.

10

### 11 **Overview of Respondents’ June 1 Testimony**

12

13 3. In their June 1 testimony, the carrier Respondents summarily reject any data-driven or  
14 other formal analytical approach to assessing the effectiveness of competition. They argue  
15 generally that the various analytical approaches being proposed by ORA and other non-  
16 Respondent parties are too difficult (e.g., measuring cost and profitability), arbitrary (e.g., lack  
17 of bright-line market definitions), backward-looking (e.g., market shares, market concentration),  
18 or irrelevant (e.g., the linkage between availability of 25/3 broadband and competition in the  
19 voice market). Their position is directly at odds with the stated objective of this OII – to obtain  
20 data and to apply a “data-driven approach” as a basis for assessing the extent of competition in  
21 California telecom markets:

22

23

24

We open this proceeding to gather information about the state of the telecom-  
munications marketplace in California. To conduct this inquiry, we seek: (1) data

1 related to competition in the retail and wholesale telecommunications markets in  
2 California; and (2) comment on existing reports and studies (including by the  
3 Commission’s Communications Division) related to the price and availability of  
4 competing telecommunications services across California’s diverse population, and  
5 its large and diverse geography. We undertake this investigation mindful of our  
6 obligation, pursuant to Public Utilities Code § 451, to ensure just and reasonable  
7 rates, terms and conditions of service. Accordingly, we request data and comment on  
8 these issues as an exercise in good government, and in light of our promise to  
9 monitor and inform ourselves about the State’s telecommunications infrastructure.  
10 his data-driven approach does not reflect an intent to regulate where the Commission  
11 lacks regulatory authority.<sup>1</sup>  
12

13 In their *Scoping Ruling* issued on July 1, the ALJ and the Assigned Commissioner further  
14 clarified that “the ultimate question before us is whether intermodal competition, in the decade  
15 after URF, has offered sufficient discipline to produce just and reasonable prices for traditional  
16 landline services.”<sup>2</sup>

17

18 4. Notably, none of the Respondents offer any alternative analytical framework, other than  
19 their emphasis upon superficial similarities between distinctly different services but without any  
20 formal scientific examination of actual substitution by consumers, such as formal cross-elasticity  
21 analyses. The carrier Respondents also reject the relevance of price comparisons or price trends  
22 as evidence of substitution or lack thereof. Instead, the carrier Respondents largely dismiss,  
23 ignore or mischaracterize important aspects of ORA and other parties' analytical framework  
24 proposals, such as quantification of Minimum Efficient Scale, examinations of price trends and,  
25 in particular, observed divergence in pricing trends among putatively substitute services, price

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1. *OII 16-11-007*, at 1-2.

2. July 1 Scoping Ruling, at 2.

1 benchmarking, profitability trends and benchmarking, and formal indicia of market concen-  
2 tration and market dominance. Instead, they argue that all forms of voice service – fixed vs.  
3 mobile, wireline vs. wireless, circuit-switched vs. VoIP – are sufficiently substitutable that they  
4 must be treated as a single market for voice service being served by multiple competing provides  
5 and offering a level of competition fully capable of constraining prices across all service and  
6 technology segments. This “single market” theory is, however, entirely unsupported by any  
7 substantive facts or analysis and, in fact, the *facts* actually compel precisely the opposite  
8 conclusion – i.e., that there are several distinct types of voice services and, while they may in  
9 some instances satisfy similar needs, market conduct and performance are not consistent with a  
10 “single market” conclusion.

11

12 5. Similarly superficial arguments are also being advanced by the carrier Respondents with  
13 respect to broadband. First, they reject the FCC-adopted minimum consumer broadband service  
14 standard of 25 Mbps download/3 Mbps upload,<sup>3</sup> claiming instead that most consumers do not  
15 require bandwidths at this or higher speeds. They argue that for purposes of analyzing the state  
16 of competition in the *voice* market, the only relevant broadband service is one that is minimally  
17 capable of supporting over-the-top (“OTT”) Voice over Internet Protocol (“VoIP”) service and  
18 nothing more, and go so far as to suggest that this requirement can be satisfied by broadband  
19 service supporting speeds of as low as 100 kbps. By defining a single “broadband” market that  
20 runs the full gamut of bandwidths, from super low-speed services (e.g., 100 kbps) on up to

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3. *I/M/O Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, 2015 Broadband Progress Report and Notice of Inquiry of Immediate Action to Accelerate Deployment, FCC 15-10 (rel. February 4, 2015), at para. 3.

1 gigabit-level services, the carrier Respondents effectively expand the roster of broadband-  
2 capable *providers* to include, in addition to the one or at most two suppliers capable of offering  
3 service at or above 25/3 in any given area, a number of other fixed wireline, fixed wireless, and  
4 mobile wireless providers offering considerably slower broadband but *not* 25/3. Of course, as  
5 with their approach to the *voice* market, the carrier Respondents offer no facts or scientific  
6 evidence as to substitutability across this full range of broadband speeds, which would be  
7 minimally necessary to support their “one market” theory.

8

9 6. Instead, the carrier Respondents argue that publicly-available data is fully sufficient for  
10 the Commission’s purposes in formulating policy going forward. Dr. Topper (Charter), for  
11 example, suggests that:

12

13 The Commission should conduct its review using the wealth of publicly-available  
14 data at its disposal about the entire market. This publicly-available data would  
15 provide a consistent source, year-over-year, that the Commission can use to  
16 determine competitive trends in California and to evaluate how competition in the  
17 State compares to the rest of the nation. As shown throughout this testimony,  
18 California’s retail voice markets are robustly competitive. The Commission’s  
19 insistence on the production of highly competitively sensitive data from a  
20 segment of the industry would not yield different or better results. To the  
21 contrary, it risks clouding the real issues.<sup>4</sup>

22

23 Publicly-available data can be informative, but typically reflects highly superficial analyses that  
24 cannot support the specific concerns regarding the state of competition as set out in the OII.

25 Portrayals of “robustly competitive markets for voice services” prevalent in publicly-available  
26 data offer no formal or scientific analysis as to substitutability, cross-elasticity, or other indicia

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4. Topper (Charter), at 7-8.

1 that would support a properly-formulated definition of the relevant product markets. And I am  
2 entirely unaware of any publicly-available data that would support the kind of geographic  
3 service availability and competition analysis that is possible only through examination of the  
4 granular availability and demand data of the type identified in the OII.

5

6 7. Since the facts and data adduced by the OII clearly cannot support the Respondents'  
7 persistent claims as to the presence of effective competition in the voice and broadband markets,  
8 they have elected instead to ignore or, worse, to mischaracterize these facts and maintain what  
9 must be seen as a fundamentally unsubstantiated portrayal of a level of competition that is  
10 simply nonexistent for either voice or broadband services.

11

## 12 **Defining the Market(s)**

13

14 8. In my June 1, 2016 testimony, I provided a summary of ORA's positions on key issues in  
15 this OII, as follows:

16

### 17 **Voice Services**

18

- 19 • Traditional local exchange carriers continue to maintain overwhelming dominance of  
20 circuit-switched voice connections; controlling some 88.6% of the nationwide voice  
21 market, including both direct retail connections and indirect wholesale services furnished  
22 to other providers for sale at retail or for incorporation into their own retail circuit-  
23 switched offerings.
- 24 • The vast majority – some 92.5% nationally and 87.4% in California – of all residential  
25 and business Voice over Internet Protocol (VoIP) connections are being provided by  
26 facilities-based wireline carriers – traditional Incumbent Local Exchange Carriers and  
27 Cable MSOs that are also the dominant providers of high-speed (25 Mbps up, 3 Mbps  
28 down or greater) broadband access.  
29

- 1 • The principal competitor to traditional wireline voice service is VoIP, but the use of VoIP  
2 requires that the customer have a broadband connection with sufficient bandwidth and  
3 reliability. The dominant broadband providers – ILECs and cable MSOs – are also the  
4 dominant voice providers, and are thus able to use their control of broadband to limit or  
5 otherwise manage customer migration to competing VoIP services. As a result, and after  
6 more than a decade in existence, these “over-the-top” VoIP services have captured only  
7 about 7.5% of the national and 12.6% of the California residential wireline voice market.  
8
- 9 • Although for many consumers mobile wireless voice service may be a substitute for fixed  
10 wireline voice telephone service, nearly two-thirds of California households that have  
11 wireless phones have chosen to retain their wireline service in order to obtain reliable  
12 access to 911, for residential alarm service, medical monitoring, and for other purposes  
13 they deem important.  
14
- 15 • There is compelling evidence as to the lack of any effective competitive challenge to  
16 legacy wireline voice telephone service. Basic wireline local telephone service prices  
17 have increased by more than 40% since being detariffed in 2008, during a period when  
18 wireless prices have been cut in half. Wireline “bundles” of unlimited local and long  
19 distance calling and service features that have become standard in virtually every  
20 postpaid and many prepaid wireless rate plans are nearly double the price for similar  
21 wireless bundles, and do not include other standard wireless features such as texting and  
22 Internet access. If wireless were an actual competitor to wireline, these wireline price  
23 levels would be unsustainable; that the high wireline prices persist belies any claim that  
24 wireless is a substitute for wireline voice service.  
25

## 26 **Broadband**

- 27
- 28 • The relevant product market for analysis in this OII is residential broadband Internet  
29 access at speeds of at least 25 Mbps download and 3 Mbps upload – i.e., the current FCC  
30 definition of “advanced telecommunications services.”  
31
- 32 • The relevant geographic market for wireline residential broadband Internet access is at  
33 the census block level. For convenience, broadband market data can be summarized over  
34 larger geographic areas, such as counties or Metropolitan Statistical Areas (MSAs), to  
35 assess the extent of broadband availability and the extent to which consumers have a  
36 choice of service provider.  
37
- 38 • There is a lack of competition and consumer choice for broadband services at speeds of  
39 25/3. Close to 70% of households in California have only one choice of a broadband  
40 provider at 25/3; and only 24% have the choice of two providers. Even in the most  
41 densely populated counties within MSAs, the results are similar: 69% of households can



1 obtain 25/3 broadband from only one unregulated monopoly provider, and only about  
2 25% have a choice of two or more providers at 25/3.  
3

- 4 • Two separate Market Share and Market Concentration (HHI) analyses were undertaken  
5 based upon broadband availability and actual broadband subscriptions. In every county  
6 in California, the HHI in both of these categories is in excess of the 2500, indicating the  
7 existence of a “highly concentrated” market as defined by the United States Department  
8 of Justice in its *Horizontal Merger Guidelines*.  
9
- 10 • Even where more than one provider nominally offers broadband service in a particular  
11 census block, the market may still be dominated by only one principal firm. Using a  
12 Market Dominance Index (“MDI”) newly developed for this purpose, there is a clear  
13 pattern of extreme dominance by a single broadband provider in virtually every county  
14 statewide.  
15
- 16 • Consistent with the lack of competition and the extreme market power being exercised by  
17 the unregulated dominant broadband providers statewide, residential broadband prices  
18 have increased by an average of 28.6% since the first URF decision was issued in 2006.  
19
- 20 • The unavailability of wholesale last-mile broadband access at reasonable rates for use by  
21 competitors in serving residential customers limits competition and competitive  
22 availability of broadband. Availability of wireless services on a wholesale basis has  
23 fostered disruptive competition and contributed to lower wireless price levels overall.  
24 The Commission should consider measures that would expand the availability of  
25 wholesale broadband services so as to help bring retail prices down to more competitive  
26 levels.  
27

28 My March 15 and June 1 testimony both devoted considerable attention to the subject of market  
29 definition. In the following discussion, I will review Respondents’ June 1 rebuttal to my  
30 previous testimony and in so doing respond to the ALJ’s subject outline as it addresses the  
31 subject of Market Definition.  
32

33 9. Markets can be defined in several different dimensions based upon the nature of the  
34 product(s) involved (“Product Markets”) and the geographic area where the products are being

1 offered by individual suppliers and within which consumers are willing or able to shop for the  
2 product among competing providers. Voice and Broadband are separate and distinct products  
3 and are offered in separate and distinct product markets. The limited overlap in functionality as  
4 between voice and broadband services (i.e., voice service may be obtained using a customer's  
5 broadband access connection) does not alter this fundamental distinction. Product markets may  
6 be defined with respect to demand or supply. If consumers are willing and able to use multiple  
7 providers' products interchangeably, the products may fall within the same product market,  
8 depending upon the extent to which such interchangeability or substitution is present. For  
9 example, consumers can substitute chicken for beef, fish for meat, or vegetables for fish or meat,  
10 but strong consumer preferences for specific foods and food choices limit such substitutability.  
11 While the theoretical ability to substitute among these products is present, thus affording such  
12 products a limited degree of cross-elasticity, they are each sufficiently unique as to constitute  
13 separate product markets for most purposes. Fixed vs. Mobile telecom services are analogous to  
14 the product distinctions extant among the various types of foods. While both support some of  
15 the same functionalities, they are viewed as sufficiently different in terms of their overall  
16 character that roughly two-thirds of California households that have mobile service continue to  
17 purchase and pay for fixed (wireline) services. Moreover, even in the absence of any formal  
18 cross-elasticity analysis as between fixed and mobile services, the fact that their respective prices  
19 continue to diverge confirms that their actual substitutability is limited.

20

1           10. Importantly, technology is not by itself a basis for market definition if the alternative  
2 technologies are individually capable of supporting the same overall set of functions.<sup>5</sup> For  
3 example, high-speed broadband can be accomplished via any of several technology architectures  
4 – fiber-to-the-home (“FTTH”), fiber-to-to-node (“FTTN”), also known as hybrid fiber-coax  
5 “HFC”), or hybrid fiber-copper. Generally, the potentially achievable broadband speed can be  
6 increased by shortening the coax or copper segments, which is accomplished by extending fiber  
7 optic facilities closer to the end user customers. From the consumer’s standpoint, any  
8 technology that is capable of achieving the required broadband speed is capable of satisfying the  
9 functional demand, so the alternate technologies are not in and of themselves market-defining.

10

11           11. Note, however, that some technology distinctions also create product distinctions. Fixed  
12 services (voice and broadband) are most often supported by a fixed wireline (copper, coax, fiber  
13 or some combination) infrastructure; mobile services always involve some radio segment in  
14 addition to fixed wireline segments. But as discussed above, fixed and mobile services do not  
15 support the same mix of functionalities and, while their demands may overlap (as is the case of  
16 beef, chicken or fish), they cannot be treated as sufficiently close substitutes to constitute a  
17 single market. The specific relationships between fixed wireless and mobile broadband as  
18 compared with fixed wireline broadband are addressed in the June 1 testimony of ORA  
19 witnesses Adam Clark and Tony Tully.

20

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5. Technology can nonetheless provide a basis for defining product markets to the extent that a specific technology presents functional service attributes that are not similarly supported by other technology architectures. Thus, wireline last-mile technology is incapable of providing the functionality associated with mobile service, such that wireline technology may be used, for analytical purposes, as a proxy for “fixed” services if the available data is otherwise organized along technology lines.

1       12. Geographic markets are defined in terms of a consumer’s ability and/or willingness to  
2 travel or relocate in order to obtain a competing service. For example, most consumers are not  
3 willing to travel very far from home to make most routine household purchases, such as for  
4 groceries. The “geographic market” served by one or more grocery stores is thus limited to the  
5 willingness of consumers to travel far from their homes to obtain potentially lower prices.  
6 Consumers may be willing to travel further for higher-ticket purchases of durable goods, such  
7 that the geographic market served by, for example, a furniture store, an auto dealership, or other  
8 “big box” stores, is likely larger than that for a local neighborhood grocery store. The Internet  
9 has vastly expanded the geographic scope of many markets by effectively eliminating the  
10 distance factor in its entirety. But “brick and mortar” retailing is still subject to geographic  
11 bounds.

12  
13       13. In the case of fixed telecommunications services supported by a wireline infrastructure,  
14 the extent of competition is limited to the service providers available at the consumer’s specific  
15 location. As I noted in my March 15 testimony (at fn. 23), Comcast is the only broadband  
16 provider offering 25/3 service at my home, but a competing provider (RCN) also offers this  
17 service just around the corner, approximately 500 feet away, *and within the same census block in*  
18 *which my house is located*. Nevertheless, unless I am willing and able to sell my house and  
19 move (which I am not), the presence of that very nearby competitor is of no value to me because  
20 I cannot obtain service from that company. Mobile service, on the other hand, is not so  
21 geographically limited in its market. Mobile spectrum licenses are issued across broader  
22 geographies such as entire metropolitan areas, states, or multi-state regions. Except in pockets  
23 where wireless coverage may be spotty, consumers can choose among any wireless licensee

1 serving the area. Moreover, since the four largest wireless carriers offer service nationwide,  
2 most consumers can retain their existing service and service provider even after a relocation to a  
3 distant point within the US.

4  
5 14. Because of their dependence upon fixed infrastructure and extremely limited geographic  
6 flexibility, fixed voice and broadband service markets are necessarily highly concentrated,  
7 because the massive capital cost of replicating (“overbuilding”) an existing wireline  
8 infrastructure is sufficiently high as to create an effective, and quite formidable, economic  
9 barrier to further competitive entry. Data provided by Respondents to this OII confirm that, in  
10 California, fixed service markets are characterized by one or at most two dominant providers.  
11 Using that data, I have calculated Herfindahl-Hirschman Indices (HHIs) for 25/3 broadband  
12 service markets by county, by Statistical Area, statewide, and with respect to the specific  
13 geographic footprint being served by each of the principal fixed broadband providers. I have  
14 found that persistently high HHIs, Market Dominance Indices, and persistent price increases are  
15 all present across all of these geographic areas, lending further support to the conclusion that  
16 fixed voice and broadband service markets are necessarily highly concentrated and that there is  
17 little or no likelihood that effective price-constraining competition is capable of developing any  
18 time soon.

19

20 15. Respondents propose an unduly expansive definition of the “voice” market, to include  
21 all fixed and mobile, wireline and wireless services, claiming, based entirely upon several  
22 superficial functional similarities, that all forms of voice service are sufficiently close substitutes  
23 as to constrain any one provider's market power. Mr. Gillan, for example, claims that “Wireless

1 pricing creates an effective ceiling that limits wireline price levels, and that this ceiling is the  
2 product of a national market characterized by four national [wireless] providers.”<sup>6</sup> However, he  
3 offers no facts or other evidence to support this assertion. His citation (at fn. 10) is to wireless  
4 *market shares*, not prices and, in fact, the source he cites (the FCC’s 2015 *Eighteenth Wireless*  
5 *Competition Report*) expressly confines its market share calculations to *wireless services only*,  
6 thus contradicting Mr. Gillan’s own market definition claim. In actuality, for comparable  
7 wireline and wireless feature packages, wireline service is far more expensive than most wireless  
8 plans. My June 1 testimony (at Table 7) shows wireline POTS service with unlimited local and  
9 long distance calling to be priced higher than comparable wireless plans. Mr. Topper states that  
10 “Cricket Wireless and MetroPCS offer ‘Talk and Text’ plans that offers unlimited talk and text  
11 for \$25/month.”<sup>7</sup> Other than citing the CDC wireless substitution reports and the CDC’s findings  
12 as to the percentage of “wireless-only” households,<sup>8</sup> Respondents offer no formal analysis as to  
13 the substitutability of wireless for wireline, such as cross-elasticity studies, pricing behavior, or  
14 other hard evidence. They offer no explanation as to why 2/3 of California households are  
15 willing to pay for both wireline and wireless, even though wireline prices are persistently higher  
16 than wireless.

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6. Gillan (Cox), at 10.

7. Topper )Charter), at 21.

8. The CDC results for the second half of 2015 were derived from a sample of 19,959 “in-person interviews that are conducted [between June and December 2015] to collect information on health status, health-related behaviors, and health care access and utilization. The survey also includes information about household telephones and whether anyone in the household has a wireless telephone.” Stephen J. Blumberg and Julian V. Luke (2016) “Wireless Substitution: Early Release of Estimates From the National Health Interview Survey, July-December 2015,” National Center for Health Statistics, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services, at 1-2. As I noted in my June 1 testimony, the CDC’s results are not supported by FCC data. See my June 1 testimony, at para. 23,

1        16. ORA’s assessment of separate and distinct wireline and wireless markets is also  
2 supported by several Respondent witnesses:

3

4 • Mr. Burt (Sprint) at 6: “[W]ireless service has indoor limitations and data capacity  
5 limitations compared to certain landline technologies, for example fiber-based broadband. In  
6 some instances, such as in highly rural areas, the lack of a strong wireless signal may  
7 preclude customers from substituting wireless service for wireline service.”

8

9 • Mr. Gillan (Cox), at 11: “There are some devices in the home that may require a wireline  
10 connection - medical monitoring equipment and fax machines are two such examples - and  
11 this means that not every household is a candidate for wireless-only service.”

12

13 Mr. Clark addresses these two issues in his July 15 testimony.

14

15        17. Dr. Topper (Charter) has gone so far as to calculate a Herfindahl-Hirschman Index (HHI)  
16 for what he and the other Respondents seek to portray as a single voice services market,  
17 consisting of, in addition to ILECs, “wireless providers, cable companies, VoIP providers and  
18 CLECs.”<sup>9</sup> No specific analytical or scientific basis is offered by Dr. Topper for the expansive  
19 “one voice market” definition upon which his HHI calculation has been based. Instead, he cites  
20 and relies upon the CPUC’s “Market Share Analysis of Retail Communications in California  
21 June 2001 through June 2013: Expanding Markets, Market Concentration, and the Impact of

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9. Topper (Charter), at 36.

1 Intermodal Competition” (“Market Share Report”). That reliance is misplaced to the extent that  
2 it effectively pre-judges the very central issue of Market Definition that itself is a key focus of  
3 this OII.<sup>10</sup> To the best of my knowledge, the Commission’s Communications Division, which  
4 prepared the “Market Share Report,” has never undertaken any formal examination of  
5 intermodal cross-elasticities and substitution among the voice services included in its Market  
6 Share calculations. Citing the very same CPUC Market Share Report, Mr. Burt correctly notes  
7 that, according to the Report, “the landline segment of the industry is highly concentrated with  
8 an HHI of slightly more than 7,000 and is well above the HHI concentration levels of the other  
9 technologies.”<sup>11</sup> He observes that “[t]he high landline concentration is not surprising considering  
10 the high barriers to landline entry.”<sup>12</sup>

11

12 18. Frontier, in its Supplemental June 1 Responses, contends that telecom services are  
13 primarily offered as “bundles” of individual services (e.g., voice, broadband, video) and that it is  
14 “more appropriate to define the market in terms of a wide range of voice services and bundles

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10. Indeed, and as I noted above (at para. 3), the OII expressly asks parties to “comment on existing reports and studies (including by the Commission’s Communications Division) ...” OII, at 1. In citing the Communications Division’s “Market Shares” report as the basis for his HHI calculation, Dr. Topper misses the very essence of the OII itself, i.e., to reexamine “existing reports and studies ... related to the price and availability of competing telecommunications services across California’s diverse population, and its large and diverse geography.”

11. Burt (Sprint), at 3, citing CPUC Communications Division Report, “Market Share Analysis of Retail Communications in California June 2001 through June 2013 (January 5, 2015),” Chart 3, HHI Market Concentration by Technology, Adjusted for ILEC and Cable Service Territories. The Market Share Report’s calculation of sector HHIs is delineated in terms of technology. As I have previously noted, technology is not itself a basis for defining product markets except to the extent that a specific technology presents functional service attributes that are not similarly supported by other technology architectures. For example, *wireline* last-mile technology is incapable of providing the functionality associated with *mobile* service. Thus, while technology-based, the Market Share Report’s sector HHI calculation for wireline service roughly corresponds to the fixed services product market.

12. *Id.*



1 that include voice services than it is to focus on “basic phone service.”<sup>13</sup> I do not agree with this  
2 assessment. However, I would note that, in advancing this type of argument, Respondents fail to  
3 acknowledge that if the market is to be defined in terms of double- or triple-play bundles, then  
4 any providers that are not capable of offering a “triple-play” would be excluded entirely from  
5 this market definition and from effectively competing in this “market.” For example, Dr. Katz  
6 (AT&T) suggests that “[w]hen multiproduct bundles are available for purchase, the incremental  
7 cost to a customer associated with obtaining an additional service (e.g., adding voice service to a  
8 bundle that already comprises video and Internet access services) is typically lower than the cost  
9 of the same service on a stand-alone basis.”<sup>14</sup> He offers an example in a footnote: “For example,  
10 in California, the incremental cost of adding voice service to an AT&T bundle of data and  
11 television service is \$9.99 per month, while the stand-alone voice price is \$20 per month.”<sup>15</sup>  
12 Providers that are not able to bundle voice with data and television would thus have difficulty  
13 competing for voice services alone. As such, the number of providers will necessarily be limited  
14 to those one or two that are capable of providing all three services, such as an ILEC with a high-  
15 speed broadband capability (such as Frontier’s VoIP service or AT&T where higher-speed data  
16 service is available) or a cable company. Single-play providers, such as those offering over-the-  
17 top VoIP (e.g., Vonage) cannot be included as competing service suppliers.

18

19 19. VoIP-based competition for fixed voice services is itself utterly dependent upon the  
20 existence of competition in the broadband market within the geography relevant to a particular

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13. Frontier Supplemental Response to OII IR#4, June 1, 2016.

14. Katz (AT&T), at Q24.

15. *Id.*, at fn. 23.

1 customer. Respondents, however, reject this inescapable truth. Dr. Katz, for example, claims  
2 that OTT VoIP can be supported with as little as 100kb of bandwidth.<sup>16</sup> Even assuming that his  
3 facts are correct (they aren't<sup>17</sup>), under this assumption the entire cost of that single-use low-speed  
4 broadband service would need to be included in the total retail price that a consumer would have  
5 to pay for OTT VoIP. Whether or not stand-alone low-speed data service, such as DSL, is even  
6 available in any given geographic market area, there is no assurance that, on an ongoing basis,  
7 customers will continue to be able to purchase low-speed broadband without also purchasing  
8 bundled voice service. In any event, the OII expressly includes 25/3 broadband within the scope  
9 of this proceeding.<sup>18</sup> Rather than address the extent of competition for this service, the  
10 Respondents either ignore it or dismiss its relevance to the "telephone service" market.

11

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16. *Id.*, at A43.

17. At an entirely theoretical level, OTT VoIP could be supported by 100 kbps service, but theory rarely translates into practice. For successful transmission of voice, very low latency is mandatory. In the context of packet switching and Internet Protocol, the term "latency" refers to the time delay involved in reassembling packets when received at their destination. Individual packets may take different routes, and may require varying intervals of time to be transported from origin to destination. In some cases, packets may arrive out-of-order. Low-speed services tend to experience higher latency than higher-bandwidth broadband, resulting in choppy voice connections that most people would find unacceptable. Moreover, consumer level broadband services are offered on a "best efforts" or "up to" basis. So just because a service is advertised as providing 100 kbps, actual speeds are often well below that level. Finally, if a customer has 100 kbps service and uses it for OTT VoIP calls, the service cannot be used for anything else (e.g., e-mail, web surfing, etc.) while a call is in progress. Depending upon the type of router that the customer uses and the manner in which its Quality of Service ("QoS") settings have been made, priority might go to only one of the services, and not necessarily to the VoIP call, or may be shared among whatever data streams are in use at the time. Under any of these conditions, the VoIP call is likely to experience potentially serious signal degradation or outright interruption.

18. The OII refers specifically to "[t]he FCC's recent update of its broadband benchmark speed to 25 Mbps down and 3 Mbps up" OII, at 8. and expressly includes within the "General Scope" of the OII the question of "How much competition is there for advanced telecommunications services at the present national standard of 25 Mbps down (and 3 Mbps up)?," citing the FCC's *Report and Notice of Inquiry, In re Deployment of Advanced Telecom*. The OII notes that the "Federal statute defines "advanced telecommunications capability" to include "broadband telecommunications capability." citing *Verizon v. FCC*, 740 F3d 623, 635 (D.C. Cir. 2014), citing 47 U.S.C. § 1302(d)(1). OII, at 14.

1        20. There is a striking inconsistency in the Respondents' positions regarding stand-alone  
2 low-speed broadband and the relevance of "triple-play" bundles in defining relevant product  
3 markets. If the customer wants 25/3 broadband and is effectively being forced to obtain it as  
4 part of a bundle that also includes voice and possibly video service as well, then the limited  
5 availability of 25/3 to one or at most two providers – both of whom also provide basic fixed  
6 voice service – indicates that rather than being irrelevant to competition for voice services, the  
7 limited availability of 25/3 actually *defines* the practical extent of competition for fixed voice  
8 services.

9

#### 10 **Measuring the Market(s) – Voice services**

11

12        21. In most geographic areas, there are only two facilities-based providers of fixed voice  
13 services – an ILEC and a cableco. And as I demonstrated in my June 1 testimony, FCC data  
14 indicates that ILECs are the underlying source of some 88.58% of all fixed voice switched  
15 access lines nationwide.<sup>19</sup>

16

17        22. Several Respondent witnesses claim that price increases for voice or other services are  
18 not indicative of a lack of competition. Dr. Katz suggests instead that

19

20        ... to the extent that any profit-maximizing firm experiences an increase in its  
21 marginal cost of production, the firm will re-optimize and increase its price,  
22 which then induces other firms *in the market* to react by changing their prices. A  
23 new market equilibrium is reached when the profit-maximizing conditions for all

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19. Selwyn June 1, 2016 Direct Testimony, at Table 4, emphasis supplied.

1 firms are satisfied under the new costs and prices. A price increase triggered by a  
2 cost increase does not indicate a lack of competition.”<sup>20</sup>  
3

4 Notably, Dr. Katz is here actually refuting his own argument. First, there is no evidence that  
5 ILEC wireline price increases were being “triggered by an increase in cost,” and certainly Dr.  
6 Katz has offered no such evidence. But he then suggests that the price increase by one firm  
7 would “then induce[] other firms *in the market* to react by changing their prices.” My emphasis.  
8 But wireless voice service providers have not been “chang[ing] their prices” to mirror the  
9 wireline price increases being imposed by ILECs, and no Respondent witness – including Dr.  
10 Katz – has cited any facts or evidence that this has actually happened. Clearly, and by Dr.  
11 Katz’s own reasoning, those non-reacting wireless carriers *must not be* “in the [same] market” as  
12 wireline ILECs *because they are not mirroring the wireline carrier price increases as Dr. Katz*  
13 *suggests would be implemented by other firms in the same market.* In my June 1 testimony, I  
14 explained specifically why price increases are, in fact, indicative of insufficient competition.

15  
16 ...the persistence of these ILEC products and pricing practices over time supports  
17 a strong inference that for a large portion of residential voice service customers,  
18 there is still no close substitute for the ILEC service, a condition that the ILECs  
19 have exploited through a succession of price increases over a time period during  
20 which the scope of other voice services has been expanding and the prices of such  
21 services have been dropping.<sup>21</sup>  
22

23 Rising wireline prices in the face of falling wireless prices cannot be squared with the “single  
24 voice market” theory and, indeed, Dr. Katz appears to concede this critically important point.

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20. Katz (AT&T) at 20-21.

21. Selwyn June 1 testimony, at para. 43.

1       23. A far more plausible explanation for the persistent and substantial run-up of prices for  
2 wireline voice services is that wireline ILECs have determined that they do not face any  
3 substantial amount of price-constraining competition from any other provider. In fact, this price  
4 increase conduct is entirely consistent with a “harvesting strategy” in which the existing, largely  
5 captive customer base is subjected to a series of price increases where the provider has  
6 determined that, within this specific group of consumers – i.e., those who continue to take  
7 wireline service even though they also take wireless – demand is relatively price-inelastic,  
8 making price increases profitable despite the loss of some customers. AT&T Corp. had itself  
9 engaged in precisely this type of “harvesting strategy” with respect to its CLEC customers  
10 following its 2004 decision to withdraw from the residential service market and pursue a merger  
11 with SBC. As described in expert testimony accompanying the Joint Application of AT&T  
12 Corp. and SBC Communications submitted to the CPUC:

13  
14       41. ... AT&T no longer markets local/long-distance bundles or stand-alone long  
15 distance services, nor does it attempt to win back customers that it has lost. AT&T  
16 executives have characterized their current position as “harvesting” the business and as  
17 an “exit over time.”  
18

19       48. As part of its “harvesting” strategy, AT&T has already instituted price increases.  
20 For example, AT&T CEO Dave Dorman has stated that AT&T is “carefully managing  
21 the decline in [and] harvest of those businesses that we will exit over time as those  
22 customers run off.  
23

24       49. AT &T has already raised rates for consumer local and interstate long distance  
25 services:

- 26 • In late 2004, AT&T raised by \$1 to \$3 per month the retail rates for various local  
27 service packages with prices that range from \$12 to \$30 per month.
- 28 • In December 2004, AT&T raised rates in a variety of states for “all distance bundles”  
29 by 52 to \$5 per month.
- 30 • AT &T has raised the monthly recurring charge for stand alone interstate long  
31 distance services by \$1 to \$2 per month for many plans.

- 1       • AT&T has also raised a number of the basic rates for international long distance  
2       services.<sup>22</sup>  
3

4 The pricing conduct on the part of the wireline ILECs here cannot support Dr. Katz's and other  
5 Respondents' notion that ILEC prices are being constrained by wireless. Quite the contrary.  
6 Having decided that traditional copper-based wireline services are on the decline, the ILECs  
7 apparently have adopted the same "harvesting strategy" that AT&T Corp. had pursued once it  
8 had reached the same conclusion with respect to its CLEC operations.  
9

10       24. Price movements are a key indicia of the presence or absence of competition, and of the  
11 level to which two putatively substitute services (e.g., fixed vs. mobile) actually compete with  
12 one another. Dr. Katz suggests that in order for ILECs to selectively target those customers who  
13 do not consider wireless a complete substitute for wireline service for wireline price increases,  
14 carriers would need specifically "to target their pricing at consumers who are reluctant to switch  
15 service providers," and suggests that there is no indication that "carriers are either willing or  
16 able" to do this.<sup>23</sup> Of course they are able to do precisely that simply by raising prices. By  
17 implementing a succession of price increases for wireline residential service, the ILECs have  
18 accomplished precisely that segmentation: They have effectively confined their legacy wireline  
19 voice market to customers who perceive (for whatever reason) the need to retain wireline voice

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22. *I/M/O Joint Application of SBC Communications Inc. ("SBC") and AT&T Corp. ("AT&T") for Authorization to Transfer Control of AT&T Communications of California (U-5002), TCG Los Angeles, Inc. (U-5462), TCG San Diego (U-5389), and TCG San Francisco (U-5454) to SBC, Which Will Occur Indirectly as a Result of AT&T's Merger With a Wholly-Owned Subsidiary of SBC, Tau Merger Sub Corporation, A.05-02-027, Joint Application of SBC Communications Inc. and AT&T Corp., filed February 28, 2005, Exhibit 1, Declaration of Dennis W. Carlton and Hal S. Sider, at paras. 41, 48-49.*

23. Katz (AT&T), at A19.

1 service and who have, by their willingness to pay the increased prices, demonstrated their  
2 captivity to this segment.

3

4 25. The presence of persistently high and escalating ILEC wireline voice price levels belies  
5 any legitimate claim that ILEC voice prices are constrained by competing voice services. It also  
6 belies the claim that wireline and wireless voice services fall within the same product market.

7 Dr. Aron has provided a highly misleading comparison of voice prices, and has certainly failed  
8 to disclose the price trends over time:

9

- 10 • The prices in her Appendix for wireline voice service are understated. They exclude, among  
11 other things, the federal Subscriber Line Charge (SLC) which she erroneously includes  
12 among “other charges.”<sup>24</sup> In fact, the SLC is a federally-tariffed rate the revenues from  
13 which flow solely to the ILEC and (with respect to the ILEC's overall profitability) are indis-  
14 tinguishable from state-jurisdiction (tariffed or detariffed) rates and revenues. The SLC and  
15 perhaps other wireline-specific fees do not apply to wireless services. A comparison of  
16 wireline and wireless prices that excludes wireline-specific fees is misleading and implies  
17 that the price differential between wireline and wireless is smaller than it acutally is.

18

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24. For example, Dr. Aron shows a \$25 monthly rate for AT&T’s “Standard Home Phone Service Primary Phone Line with Flat Rate Line and unlimited local calling” and notes that “what is not included” in the \$25 price are “Equipment, installation, charges for long distance or local toll calling, taxes, fees and other charges including universal service, installation, inside wire, and subscriber line charges.” Aron (AT&T), Appendix 1, p. 88. Notably, in the few weeks since her testimony was filed on June 1, AT&T appears to have increased the rate for this service by \$1.00, to \$26. <https://www.att.com/shop/home-phone/landline.html> (accessed 7/14/16). Notably, the “\$26” price that is now being quoted on the AT&T website similarly and misleadingly omits the SLC and other applicable charges.

- 1 • Prices given for “local-only” wireline services do not include any charges for toll services,  
2 which are included in virtually every wireless rate plan, both prepaid and postpaid.  
3
- 4 • Wireless rates include some or all handset costs (sometimes requiring a contract with an  
5 early terminating fee (“ETF”)); wireline rates do not include recovery of any handset costs.  
6
- 7 • Over-the-top VoIP service prices do not include the cost of the broadband connection, or any  
8 allocated portion thereof  
9
- 10 • Per Dr. Aron's own compilation, ILEC rates for wireline services that are most comparable  
11 with those offered by wireless carriers are generally higher, when all relevant charges are  
12 included.  
13
- 14 • Dr. Aron's exhibit also shows that some providers offer different price levels in different  
15 geographic markets (e.g., Charter).  
16
- 17 Importantly, the pricing information being provided by Dr. Aron is as of a single point in time,  
18 and thus offers no insights as to price trends and movements over time. In short, and despite its  
19 size (98 pages), Dr. Aron’s pricing appendix cannot be used to inform the Commission as to the  
20 actual pricing trends and relationships that prevail in the various California telecommunications  
21 markets.

22



1 **Measuring the Markets – Broadband service availability and competition**  
2

3 26. My June 1 direct testimony included a detailed quantitative analysis of the California  
4 25/3 broadband market, and provided HHI calculations on a county-by-county basis as well as  
5 for each of the footprints served by the principal ILEC and cable Respondents to this OII. For  
6 purposes of this analysis, I utilized actual subscription data for most of the Respondent carriers  
7 that they had submitted in response to IR#6 of the OII. As such, the HHI calculations presented  
8 in my June 1 testimony reflected actual sales-based market shares rather than market shares  
9 based upon *availability* that I had previously calculated in connection with the Charter/TWC  
10 mergers and the Verizon/Frontier transaction.<sup>25</sup> I also developed a new index of market  
11 dominance to reflect the deviation between the “equal shares” assumption underlying the  
12 previous availability-based HHI calculations and the actual market shares derived from  
13 subscription data. From the results of my analysis, it is apparent that the California 25/3  
14 broadband market is both highly concentrated and exhibits a high degree of market dominance  
15 even in the most competitive counties.

16

17 27. Dr. Katz cites an observation in the Commission’s *URF I* Decision, D.06-08-030 that  
18 “Market share tests are inherently backward looking and not good predictors of future  
19 developments, particularly in a rapidly changing industry like telecommunications.”<sup>26</sup> Inasmuch  
20 as a stated purpose of the current OII is to reexamine the various URF rulings, it is less than

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25. Calif. PUC A.15-07-009 (Charter/TWC/Bright House merger), Reply Testimony of Lee L. Selwyn, January 15, 2016, at paras. 124-127, and Table 23; Calif. PUC A.15-03-005 (Verizon/Frontier transaction), Supplemental Testimony of Lee L. Selwyn, September 11, 2015, at para. 58 and Table 5.

26. Katz (AT&T), at fn 22.

1   apparent that this particular statement should be afforded any particular weight at this time.  
2   Obviously, any calculation of current market shares and of market concentration based thereon  
3   must necessarily use existing historically-driven data as a starting point. However, this does not  
4   mean that such calculations are in any sense “backward-looking” unless it can be shown that the  
5   existing conditions are not representative of the future. No evidence has been offered in this  
6   proceeding indicating that market concentration is declining for *properly-defined* voice and  
7   broadband markets. Instead, all of the evidence points to a persistent and ongoing pattern of  
8   high market concentration. Even Dr. Topper agrees that the HHI is “[a] commonly used  
9   measure of concentration .... The U.S. DOJ and the FTC in their *Horizontal Merger Guidelines*  
10   define Unconcentrated Markets as having an HHI below 1500; Moderately Concentrated  
11   Markets as having an HHI between 1500 and 2500; and Highly Concentrated Markets as having  
12   an HHI above 2500.”<sup>27</sup> Other than as to the definition of the relevant product market, Dr. Topper  
13   and I appear to be in agreement as to the relevance of HHI analyses as indicia of market  
14   concentration.

15

16       28. In his attempt to discredit any use of concentration analysis as an indicia of competition,  
17   Dr. Katz cites a statement in my March 15 testimony that “an examination of concentration  
18   should not be the stopping point of the analysis.”<sup>28</sup> His truncation of my testimony omits my  
19   affirmative discussion as to the manner in which concentration analysis should be applied:

20

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27. Topper (Charter), at 36.

28. Katz (AT&T), at A12.

1           Thus, the evaluation of the structural attributes of a market (market share  
2           information being the most commonly studied statistic) should be the starting  
3           point in the analysis of market power, but certainly not the stopping point.  
4           Market share information, or more generally, information on the number and size  
5           distribution of firms in a market will not be meaningful, independent of an  
6           evaluation of behavioral and performance attributes of the market. Nor ... will  
7           information on entry conditions to the exclusion of all other structural, behavioral,  
8           or performance attributes of a market, be meaningful either.  
9

10       Nowhere have I suggested that high concentration levels are dispositive, but the greater the  
11       extent to which market power is concentrated in one or two firms, the less opportunity  
12       competitors will have to “break into” such “fortress” markets. Examining market concentration  
13       in combination with an analysis of Minimum Efficient Scale (“MES”), for example, overcomes  
14       the “backward-looking” concerns regarding market share/market concentration data. If an MES  
15       analysis suggests that only one or two efficient firms can exist in a particular market, then  
16       existing high concentration levels can be expected to persist well into the future. And none of  
17       the Respondents has offered any evidence or, for that matter, even *suggested*, that substantive  
18       additional entry into the fixed wireline broadband services market is a serious possibility.  
19       Indeed, the evidence that exists actually points to precisely the opposite conclusion: Verizon  
20       discontinued its *FiOS* investment initiative after 2010 and has been actively seeking to exit the  
21       wireline broadband market ever since. And with the minor exception of some isolated market-  
22       specific entries by companies like google and AT&T, there has been no mass scale broadband  
23       infrastructure investment initiative in the US for nearly a decade. And none of the Respondents’  
24       rhetoric about “competition” can alter this fundamental fact.

25

1       29. The OII correctly specifies that the assessment of competition in the fixed broadband  
2 market should be limited to 25/3 and above. Carriers such as Verizon claim that there is no  
3 National Standard of 25/3, but the FCC has made it clear that this is an appropriate minimum  
4 standard going forward, and the OII expressly refers to 25/3 as a “standard.”<sup>29</sup> It would make no  
5 sense for the Commission to base forward-looking policy upon outdated notions of what  
6 constitutes “broadband” services for California consumers. Even if, for the sake of discussion,  
7 the Commission were to conclude that the low-speed broadband market is not highly  
8 concentrated but that the high-speed (25/3 and above) is, no purpose would be served in  
9 formulating a forward-looking regulatory policy premised upon the putative existence of  
10 competition for what is undeniably an outdated service.

11

12       30. Notably, these same carriers, both individually and through their various trade  
13 associations, had strongly opposed the FCC’s 25/3 initiative.<sup>30</sup> However, their positions were  
14 soundly rebuffed by FCC:

15

16       We also take seriously Congress’s focus on “advanced” capability, and its  
17 direction for the Commission to take “immediate action” if such capability is not  
18 being deployed in a reasonable and timely fashion. Verizon asserts that the  
19 benchmark should “evaluate whether consumers are receiving a baseline level of  
20 broadband, not to determine how many consumers can use top-tier broadband  
21 service.” But the statute requires the Commission to conduct an inquiry into the  
22 availability of advanced services; *it did not direct us to consider what is most*  
23 *commonly available or subscribed to.* By requiring the Commission to conduct  
24 an inquiry on advanced telecommunications capability, Congress did not intend  
25 for the Commission to measure merely what is commonplace and available to all

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29. OII, at §6.1, p. 14..

30. *FCC 2015 Broadband Progress Report*, fn. 3, *supra*, at paras. 51-52.

1 or almost all, but also to identify emerging needs and capabilities. Congress  
2 directed that we measure – and take steps necessary to promote – deployment of  
3 those advanced offerings. The 25 Mbps/3 Mbps benchmark permits present day  
4 households to access current broadband services and encourages the growth of  
5 services that are still nascent. While the speed benchmark is consistent with  
6 services already being offered and adopted, it properly accommodates advanced  
7 capabilities and encourages deployment of new technologies and services. We  
8 thus continue the Commission’s policy of attempting to strike an appropriate  
9 balance that satisfies the purpose of this report: to establish a practical benchmark  
10 that is not merely aspirational, but supports a contemporary and forward-looking  
11 vision of the high-quality services referenced in the statute. ...<sup>31</sup>  
12

13 31. Moreover, in their own advertising and marketing, the same providers that had *opposed*  
14 25/3 consistently *promote* speeds even greater than 25/3 as what their customers really need.  
15 Verizon, for example, has been running a TV commercial for *FiOS* in the northeast in which it  
16 touts how many photos (120) and songs (30) can be downloaded over its 100/100 *FiOS* service  
17 in the 12 seconds it takes to pour a cup of coffee.<sup>32</sup> Charter similarly emphasizes how fast its  
18 broadband service is in its print and TV advertising.<sup>33</sup> In light of their active and persistent  
19 promotion of broadband services even faster than 25/3, it is to say the least highly disingenuous  
20 for any of these Respondents to actually suggest to the Commission that broadband speeds of as  
21 low as 100 kbps (per Dr. Katz) would even remotely satisfy the needs of California consumers.  
22

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31. *Id.*, citations omitted, emphasis supplied.

32. <https://www.youtube.com/watch?v=ZW4VXfK8D8Y> (accessed 7/13/16).

33. See, e.g., <https://www.youtube.com/watch?v=OPIEF2JvEr8> (accessed 7/13/16).

1       32. Dr. Aron (AT&T) claims that "...most census blocks (91.9 percent of them) had  
2 broadband service available with speeds above 1.5 Mbps from six or more providers."<sup>34</sup> This  
3 assessment includes both fixed and mobile broadband services, including both wireline and  
4 wireless.<sup>35</sup> Mr. Clark responds to Dr. Aron's "91.9 percent" analysis in more detail.<sup>36</sup> Note that  
5 mobile wireless subscription data at the census block level that was provided in response to OII  
6 IR#7 is based upon customer billing address. Customers may subscribe to wireless but be  
7 unable to use it at home. Dr. Aron offers no evidence as to *where* the wireless data services to  
8 which she refers is actually available for use or is being used by its customers. Also, Dr. Aron's  
9 assessment includes both 3G and 4G wireless service, neither of which are substitutes for  
10 wireline broadband, as detailed in the June 1, 2016 Direct Testimony of Adam Clark.<sup>37</sup> Fixed  
11 wireless broadband has a very limited customer base nationally, and according to the FCC,  
12 "satellite and fixed wireless account for less than three percent" of broadband data subscriptions  
13 nationwide.<sup>38</sup> I examined the pricing and availability of fixed wireless broadband in detail in my  
14 testimony for ORA in the 2014 Comcast/TWC merger proceeding, and found that fixed wireless  
15 broadband prices are significantly higher than wireline broadband prices for comparable

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34. Aron (AT&T), at 35, and Figure 10 at 37.

35. *Id.*

36. Clark (ORA), at II-1 *et seq.*

37. Clark (ORA), June 1, 2016, at II-4 to II-6.

38. FCC, *I/M/O Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 15-191, 2016 Broadband Progress Report, Rel. January 29, 2016, at fn. 79.

1 services, and that most have a relatively limited data cap.<sup>39</sup> Finally, Dr. Aron’s reference to  
2 broadband speeds as low as 1.5 Mbps is simply nonresponsive to the specific issue being  
3 addressed by the OII – competition for 25/3 broadband.

4  
5 33. Virtually every wireless data plan (mobile and fixed) has aggregate use (bandwidth)  
6 limits before overtime charges apply or, in the case of so-called “unlimited” data plans, before  
7 throttling is imposed. No evidence as to any consequential level of substitution as between fixed  
8 wireline broadband and any wireless broadband has been offered. Fixed wireless broadband  
9 prices are considerably higher than wireline broadband prices, such that this service would only  
10 be demanded in areas where wireline broadband is not currently available. Finally, Dr. Aron's  
11 assessment implicitly treats fixed and mobile broadband as comprising a single market, while  
12 offering no data or scientific basis for such a contention.

13

#### 14 **Conclusion**

15

16 34. The July 1 *Scoping Ruling* states that “the ultimate question before us is whether  
17 intermodal competition, in the decade after URF, has offered sufficient discipline to produce just  
18 and reasonable prices for traditional landline services.” The data and analysis presented in this  
19 proceeding compels the inescapable conclusion that the intermodal competition that has arisen in  
20 the decade after URF does not offer sufficient discipline to produce just and reasonable prices  
21 for traditional landline services. Prices in the two most highly concentrated product markets –  
22 wireline voice and wireline broadband – have continued to escalate *even while prices for*

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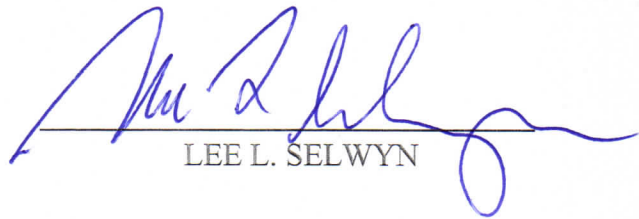
39. Declaration of Lee L. Selwyn, A.14-04-013, A.14-06-012, December 10, 2014, at 45-46, para. 41, Table 4.

1 *virtually all of the putative intermodal “competitors” have been on the decline.* Intermodal  
2 alternatives have clearly created additional choices for consumers, but not to the point where  
3 their existence has operated to discipline dominant incumbent wireline carrier prices. The  
4 superficial similarities that Respondents seek to portray as between dominant wireline carrier  
5 services and intermodal alternatives cannot and should not be allowed to replace the data-driven  
6 approach that the Commission has sought to pursue in this OII. The “competition” upon which  
7 the URF had relied as a basis for its elimination of price regulation has failed to materialize, and  
8 the Commission should pursue policy options that recognize this inescapable reality.



DECLARATION

I declare under penalty of perjury that the foregoing statements are true and correct to the best of my knowledge, information and belief, and if called to testify thereon I am prepared to do so.



LEE L. SELWYN

Executed at Boston, Massachusetts  
this 15th day of July, 2016.