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January 7, 2004

BY HAND DELIVERY

Ms. Blanca Bayó, Director
Commission Clerk and Administrative Services
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket No. 030851-TP

Dear Ms. Bayó:

Enclosed for filing on behalf of MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc. are an original and fifteen copies of the following documents:

- 00242-04 1. The Public Version of the Rebuttal Testimony of Dr. Mark T. Bryant on behalf of MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc.;
- 00263-04 2. The Public Version of the Rebuttal Testimony of James D. Webber on behalf of MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc.;
- 00264-04 3. The Rebuttal Testimony of Sherry Lichtenberg on behalf of MCImetro Access Transmission Services, LLC and MCI WorldCom Communications, Inc.;

Please acknowledge receipt of these documents by stamping the extra copy of this letter "filed" and returning the same to me.

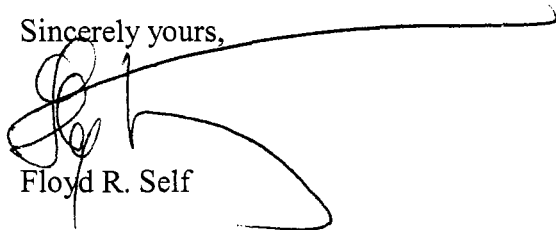
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Thank you for your assistance with this filing.

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FPSC-BUREAU OF RECORDS

Sincerely yours,



Floyd R. Self

FRS/amb
Enclosures

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been served on the following parties by Hand Delivery (*), electronic mail, and/or U. S. Mail this 7th day of January, 2004.

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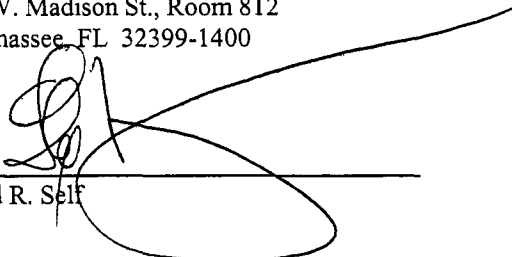
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Floyd R. Self

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Implementation of requirements
arising from Federal Communications
Commission's triennial UNE review: Local
Circuit Switching for Mass Market
Customers. || DOCKET NO. 030851-TP

REBUTTAL TESTIMONY OF DR. MARK T. BRYANT

On Behalf Of

MCI WORLDCOM COMMUNICATIONS, INC.

AND

MCIMETRO ACCESS TRANSMISSION SERVICES LLC

January 7, 2004

PUBLIC VERSION

DOCUMENT NUMBER-DATE

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FPSC-COMMISSION CLERK

1 Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

2 A. My name is Mark T. Bryant, and my business address is 4209 Park
3 Hollow Court, Austin, Texas.

4 Q. ARE YOU THE SAME MARK T. BRYANT WHO PREVIOUSLY
5 FILED DIRECT TESTIMONY IN THIS PROCEEDING?

6 A. Yes, I am.

7 Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

8 A. The purpose of my rebuttal testimony is to respond to the direct testimony
9 of BellSouth witnesses Pleatsikas, Tipton, Stegeman, and Aron and
10 Verizon witness Fulp.

11 I. *REBUTTAL OF THE TESTIMONY OF DR. PLEATSIKAS*

12 Q. DO YOU AGREE WITH THE ROLE OF MARKET DEFINITION
13 IN DETERMINING THE DEGREE OF ACTUAL COMPETITION
14 FOR LOCAL EXCHANGE SERVICE (THE “TRIGGERS”
15 ANALYSIS) AND IN DETERMINING THE POTENTIAL FOR
16 CLEC SWITCH DEPLOYMENT IN FLORIDA AS OUTLINED BY
17 DR. PLEATSIKAS?

18 A. In general, yes. In discussing the role of market definition, Dr. Pleatsikas
19 correctly notes that the market definition should permit a granular analysis
20 and should reflect cost or other differences that might affect a competitor’s

1 ability to provide service and that the market should be defined in such a
2 way as to reveal differences in markets that would result in differing
3 findings of impairment. Dr. Pleatsikas also correctly identifies some of the
4 cost differences that have an impact on a CLEC's decision to offer UNE-L
5 based local exchange service.

6 **Q. DO YOU AGREE WITH DR. PLEATSIKAS' CONCLUSION THAT**
7 **A MARKET DEFINITION OF UNE RATE ZONES DIVIDED BY**
8 **COMPONENT ECONOMIC AREAS ADEQUATELY CAPTURES**
9 **THE FACTORS THAT AFFECT A CLEC'S DECISION TO OFFER**
10 **UNE-L BASED SERVICE?**

11 A. No, I do not. Among the factors cited by Dr. Pleatsikas to support his
12 proposed market definition are the differences in rates for UNE loops and
13 the cost of transport from customers' locations to the CLEC's switch.
14 While Dr. Pleatsikas' market definition captures the differences in
15 recurring rates for UNE loops and other ILEC rate elements, it fails to
16 adequately capture the effect that the cost of transport and the costs
17 imposed by other ILEC charges may have on a CLEC's decision to enter
18 the market as a UNE-L based local service provider.

19 **Q. IN WHAT WAY DOES DR. PLEATSIKAS' MARKET**
20 **DEFINITION FAIL TO ADEQUATELY ADDRESS THE EFFECT**
21 **OF THE COST OF TRANSPORT?**

1 A. The rates charged by BellSouth for transport rate elements vary by
2 distance as well as by rate zone. As a result, providing service at a wire
3 center that is located further from a CLEC's switch is more costly to the
4 CLEC than serving a wire center that is close to the CLEC's switch.
5 Failure to recognize this cost differential in effect averages transport costs
6 across all wire centers in BellSouth's proposed markets. While the market
7 as a whole might be profitable under Dr. Pleatsikas' market definition, the
8 potential exists that some wire centers within the proposed market would
9 be unprofitable to serve. If a market as broad as a CEA is defined,
10 differences in profitability in wire centers will be obscured, and the
11 impairment analysis will thus fail to capture any areas where the CLECs
12 cannot profitably provide service.

13 **Q. WHAT OTHER CLEC COSTS VARY AMONG WIRE CENTERS?**

14 A. There are a number of cost factors that vary among wire centers. These
15 include the number of addressable lines in the wire center, the number of
16 lines for which the CLEC is capable of offering DSL services, the number
17 of lines in the wire center served by digital loop carrier technology, the
18 relative number of business and residential customers in the wire center,
19 and the demographics of customers served from the wire center.

20 **Q. HOW DOES THE NUMBER OF ADDRESSABLE LINES IN THE**
21 **WIRE CENTER AFFECT THE CLEC's COSTS?**

1 A. The number of addressable lines in the wire center affects the CLEC's
2 ability to recover the substantial fixed cost associated with establishing a
3 collocation in the wire center. Some of these costs are in the form of ILEC
4 nonrecurring charges for the establishment of the collocation, and other
5 are in the form of CLEC capital expenditures for equipment to be located
6 in the collocation space, and the cost of installing and configuring the
7 equipment. The fewer the number of lines that are served from a particular
8 wire center, the fewer the number of potential CLEC customers over
9 which these costs may be spread, and thus the higher the CLEC's per-
10 customer cost will be.

11 **Q. HOW DOES THE NUMBER OF LINES SERVED BY DIGITAL**
12 **LOOP CARRIER AFFECT THE CLEC'S PROFITABILITY?**

13 A. The use of digital loop carrier technology affects CLEC profitability in
14 two ways. First, under the terms of the FCC's Triennial Review Order, the
15 ILEC is not obligated to provide unbundled access to the packet switching
16 capability of hybrid fiber-copper loops. This provision of the order
17 effectively precludes the CLEC from offering DSL services to those
18 customers whose loops are provisioned using DLC technology. This
19 reduces the revenue potentially available to the CLEC in the wire center to
20 recover its fixed costs. It also may reduce the market share that the CLEC
21 is capable of achieving, particularly among the higher-spending residential
22 customers and business customers, who are more likely to demand
23 broadband data services.

1 Second, the use of digital loop carrier technology, and particularly
2 next-generation DLC systems, complicates the process of unbundling
3 loops for use by the CLEC. As explained in the testimony of Mr. Webber,
4 the methods proposed thus far for unbundling of loops provided over
5 digital loop carrier systems either are not yet tested, or result in significant
6 quality of service or cost issues for CLECs.

7 **Q. IN WHAT WAYS DO THE PROPORTION OF BUSINESS AND**
8 **RESIDENCE CUSTOMERS AND THE DEMOGRAPHIC**
9 **CHARACTERISTICS OF CUSTOMERS IN THE WIRE CENTER**
10 **AFFECT CLEC PROFITABILITY?**

11 A. Each of these factors affect the revenue that is potentially available to the
12 CLEC in each wire center. Because business customers generally produce
13 more revenue than residential customers under current pricing practices, a
14 larger proportion of business customers means a larger potential revenue
15 stream for the CLEC. Likewise, the demographic characteristics of the
16 wire center may affect the potential revenue available to the CLEC. A
17 wire center with a large proportion of affluent customers, or a wire center
18 with a large proportion of younger, more tech-savvy customers will likely
19 generate more revenue per customer than wire centers without these
20 characteristics.

21 **Q. DR. PLEATSIKAS HAS ARGUED THAT A WIRE CENTER**
22 **MARKET DEFINITION DOES NOT CAPTURE THE**

1 **ECONOMIES OF SCALE THAT PERTAIN TO CERTAIN COSTS**
2 **INCURRED BY THE CLEC IN PROVIDING SERVICE. DO YOU**
3 **AGREE?**

4 A. Yes, I agree that certain costs that the CLEC will incur in providing local
5 exchange service using its own switching facilities are not specific to the
6 wire center. Examples would include the fixed cost purchasing and
7 installing switching and signaling facilities, and the development of billing
8 and provisioning systems. The question, however, is whether
9 consideration of the economies of scale that pertain to these cost factors
10 should rule out consideration of the cost differentials that exist between
11 wire centers. I believe that both wire center specific costs and costs that
12 are incurred over a broader area are important considerations for a CLEC
13 considering offering local exchange service using its own switching
14 facilities. However, because the costs of switching, and billing and
15 provisioning systems are incurred on behalf of a relatively much larger
16 pool of customers over which the costs may be spread, they are a less
17 important factor in the entry decision than wire center specific fixed costs,
18 which must be spread over a relatively much smaller number of
19 customers.

20 To illustrate this point, I have attached a chart as Exhibit MTB-4.
21 This chart illustrates the investment per customer for a local exchange
22 switch, with the assumption that the fixed investment for the switch is
23 \$1,000,000, and the per customer investment is \$100. As the chart clearly

1 shows, the economies of scale in the switch are achieved fairly rapidly. By
2 the time the CLEC is serving a few thousand customers, the rate of decline
3 in the per-customer investment has slowed dramatically, and adding
4 additional customers results in a miniscule decrease in the per customer
5 investment.

6 **II. REBUTTAL OF THE DIRECT TESTIMONY OF MS. TIPTON**
7 **(TRIGGERS)**

8 Q. **MS. TIPTON STATED IN HER DIRECT TESTIMONY THAT THE**
9 **“TRIGGERS” ANALYSIS IS A SIMPLE COUNTING EXERCISE –**
10 **ONCE THE COMMISSION HAS DETERMINED THAT THREE**
11 **CARRIERS ARE PROVIDING LOCAL SERVICE TO MASS**
12 **MARKET CUSTOMERS, IT NEED LOOK NO FURTHER. DO**
13 **YOU AGREE?**

14 A. Only in part. To be sure, once the Commission has determined what sort
15 of carriers are suitable for inclusion in the counting exercise, the counting
16 itself is a simple process. The more challenging aspect of the decision that
17 the Commission faces is in determining which carriers may appropriately
18 be counted. The FCC has identified a number of factors that must be
19 considered in this determination. These include:

- 20 (1) Corporate ownership;
21 (2) Active and continuing market participation;
22 (3) Intermodal competition; and
23 (4) Scale and scope of market participation.

1 I discuss each of these rules, and other pertinent considerations, below. To
2 aid the Commission in reviewing evidence that purports to show that
3 either the retail or wholesale trigger has been met in a particular market, I
4 have also prepared a flowchart that summarizes the requisite analysis. This
5 flowchart is attached as Exhibit MTB-5 to my testimony.

6 **Q. WHAT ARE THE FCC'S RULES WITH RESPECT TO**
7 **CORPORATE OWNERSHIP?**

8 A. The FCC has imposed two separate restrictions on corporate ownership.
9 First, a carrier can only count toward the retail or wholesale trigger in a
10 particular market if that carrier is unaffiliated with the incumbent.
11 *Triennial Review Order*, ¶ 499. Second, to prevent “gaming,” carriers
12 affiliated with one another, but not the incumbent, only count as a single
13 carrier toward satisfying the pertinent trigger. *Id.* (In both instances, the
14 FCC relied on a definition of affiliation found in Section 3 of the Act (47
15 U.S.C. § 153(1)). *Id.*, n. 1550). These two requirements appear as the
16 second and third items on the flowchart in Exhibit MTB-5.

17 **Q. WHAT ARE THE FCC'S RULES WITH RESPECT TO A**
18 **POTENTIAL TRIGGERING CARRIER'S ACTIVE AND**
19 **CONTINUING MARKET PARTICIPATION?**

20 A. The FCC stresses that potential triggering carriers must be “actively
21 providing voice service to mass market customers in the market.” *Id.*, ¶
22 499. Moreover, the state commission must verify that the competitors in

1 question have not, for example, filed a notice to terminate service in that
2 market (*Id.*, n. 1556) or provided other evidence demonstrating that they
3 no longer intend to be an active participant in that market. These
4 requirements are reflected in the fourth item in the flowchart in Exhibit
5 MTB-5.

6 The clear intent of these rules is to ensure that any company
7 counted toward a trigger is an active and continuing participant in the
8 relevant market. To give these rules economic meaning, the Commission
9 should require evidence that any company counted toward a trigger is
10 actively soliciting new customers and has, in fact, added new customers *in*
11 *that market* within the recent past (*e.g.*, the most recent month for which
12 data are available).

13 **Q. WHAT ARE THE FCC'S RULES WITH RESPECT TO**
14 **INTERMODAL COMPETITION?**

15 A. The FCC requires states to consider whether intermodal alternatives are
16 comparable in “cost, quality and maturity” to the incumbent’s switched
17 mass-market voice services before counting such alternatives toward the
18 trigger in any market. *Id.*, n. 1549. *See also* ¶ 97. Based on these criteria,
19 the FCC specifically indicated that it did not expect states to count CMRS
20 carriers toward either trigger. *Id.*, n. 1549. The FCC defines CMRS
21 carriers as “any mobile service, as defined in section 3 of the Act, as
22 amended, provided for profit and making interconnection services
23 available to the public.” *Id.*, n. 164, citing 47 U.S.C. § 332(d)(1). This

1 definition includes, but is not limited to, traditional cellular carriers.
2 Similarly, the FCC indicated that fixed wireless has “not proven to be
3 viable or deployable on a mass market scale,” implying that fixed wireless
4 services do not meet the “comparable in cost, quality and maturity”
5 standard for inclusion in the trigger analysis. *Id.*, ¶ 310. The FCC did,
6 however, leave open the option of counting carriers that use packet
7 switches or soft switches to provide voice services to mass-market
8 customers. *Id.*, n. 1549.

9 To give economic meaning to these rules, I recommend that the
10 Commission place the burden of proof on the ILECs to demonstrate that
11 any intermodal alternative it proposes to count toward the triggers satisfies
12 the “comparable in cost, quality and maturity” standard identified in
13 footnote 1549 to the *Triennial Review Order*. I have therefore included as
14 the fifth item in the Exhibit MTB-5 flowchart an evaluation of the
15 incumbent’s showing as to the cost, quality and maturity of any intermodal
16 providers proffered as potential triggering companies.

17 **Q. SHOULD CABLE TELEPHONY PROVIDERS BE CONSIDERED**
18 **POTENTIAL MASS-MARKET TRIGGERING COMPANIES?**

19 A. No. As the FCC acknowledged, cable telephony fails to serve the “crucial
20 function” of affording access to the incumbent’s loops, (*Id.*, ¶ 439) and
21 therefore “provides no evidence that competitors have successfully self-
22 deployed switches as a means to access the incumbents’ local loops, and
23 have overcome the difficulties inherent in the hot cut process.” *Id.*, ¶ 440.

1 Cable telephony's strategy is to "bypass the incumbent LECs' networks
2 entirely." *Id.* This strategy is only available to a single firm in any market
3 because cable TV companies, due to "unique economic circumstances of
4 first-mover advantages and scope economies, have access to customers
5 that other competitive carriers lack." *Id.*, ¶ 310. As a result, neither cable
6 telephony nor CMRS "can be used as a means of accessing the
7 incumbents' wireline voice-grade local loops. Accordingly, neither
8 technology provides probative evidence of an entrant's ability to access
9 the incumbent LEC's wireline voice-grade local loop and thereby self-
10 deploy local circuit switches." *Id.*, ¶ 446. Any competitive facilities that
11 allow access to some customer locations but not others clearly cannot be
12 regarded as probative evidence of no impairment concerning those
13 customer locations that cannot be reached by the competitive facilities.
14 Cable telephony is at most an alternative to the ILEC's local voice service
15 for the specific customer locations served via the cable company's
16 facilities, which typically do not reach all of the ILEC's mass-market
17 customer locations. (For example, cable facilities frequently do not serve
18 the central business districts in which many mass-market small business
19 customers may be located. *Id.*, n. 1349.)

20 For similar reasons, the FCC determined that the availability of
21 cable telephony does not eliminate impairment with respect to the ILEC's
22 voice-grade loop facilities. *Id.*, ¶¶ 228, 229 and 245. Because cable
23 telephony offers an alternative to the ILEC's mass-market switching

1 facilities only where it also offers an alternative to the ILEC's loop
2 facilities, it logically follows that cable telephony does not cure
3 impairment with respect to mass-market switching, either.

4 In addition, cable telephony does not unambiguously fulfill the
5 "cost, quality and maturity" criteria established by the FCC. Cable
6 telephony services (particularly the recent variants provided using Voice
7 over Internet Protocol, or VoIP, technology) are relatively new; it is not
8 yet clear whether most consumers perceive such services to be comparable
9 to local telephone service, especially with respect to reliability issues such
10 as E-911 and backup power in emergencies. Thus, I believe that a
11 reasoned analysis disqualifies cable telephony from being considered as a
12 "close enough" substitute for the ILEC's local voice services to be
13 included in the product market for the mass-market switching impairment
14 analysis.

15 **Q. WHAT ARE THE FCC'S RULES WITH RESPECT TO THE**
16 **SCALE AND SCOPE OF MARKET PARTICIPATION?**

17 A. The FCC identified specific rules with respect to scale and scope of
18 market participation for wholesale providers and more general guidance
19 with respect to the scale and scope of such participation for retail
20 competitors that self-deploy switching.

21 For a competitor to be counted toward the wholesale trigger in a
22 given market, the carrier must "be operationally ready and willing to
23 provide wholesale service to all competitive providers in the designated

1 market.” *Triennial Review Order*, ¶ 499 (as amended by the FCC’s *Errata*
2 released on September 17, 2003). The wholesale carrier need not,
3 however, provide “the full panoply of services offered by incumbent
4 LECs.” *Id.*

5 For retail providers, the FCC provides state commissions with the
6 far more general guidance that, “in circumstances where switch providers
7 (or the resellers that rely on them) are identified as currently serving, or
8 capable of serving, only part of the market, the state commission may
9 choose to consider defining that portion of the market as a separate market
10 for purposes of its analysis.” *Id.*, n. 1552. In the context of this
11 Commission’s investigation, the FCC’s general guidance provides for
12 instances in which the Commission may choose to conduct its trigger
13 analysis on a more granular basis than the wire center or, in the
14 alternative, provides guidance as to whether a particular competitor should
15 count toward the trigger in a given wire-center market as defined by the
16 Commission.

17 The Commission can achieve the same effect either by narrowing
18 the market definition in such a way that the potential triggering companies
19 do in fact offer services to all, or virtually all, customers within the
20 defined market, or by declining to count companies that do not offer
21 services to all, or virtually all, mass-market customers within the
22 geographic market that the Commission adopts. Either approach
23 accomplishes the essential economic purpose of applying triggers in a

1 manner that ensures that all, or virtually all, customers within a given
2 market have significant alternatives.

3 **Q. WHY DO YOU SAY THAT TRIGGERS SHOULD BE APPLIED IN**
4 **A WAY THAT ENSURES ALL, OR VIRTUALLY ALL,**
5 **CUSTOMERS WITHIN A GIVEN MARKET HAVE SIGNIFICANT**
6 **ALTERNATIVES?**

7 A. First and foremost, such an approach is consistent with the pro-
8 competitive goals of the Act and this Commission. To date, UNE-P has
9 proven to be the most successful and widespread vehicle for providing
10 mass-market customers with competitive alternatives to the incumbents'
11 retail local exchange services. By its very nature, UNE-P allows
12 competitors to offer alternatives to each and every customer that the ILEC
13 serves. Eliminating access to unbundled switching is inherently anti-
14 consumer unless the Commission can be very sure that *all* of the
15 customers who can be served via UNE-P can also be served through some
16 alternative form of competitive entry.

1 **Q. IS IT YOUR TESTIMONY THAT THE ILEC MUST**
2 **DEMONSTRATE THAT POTENTIAL TRIGGERING**
3 **COMPANIES ARE CURRENTLY OFFERING RETAIL LOCAL**
4 **EXCHANGE SERVICES TO (OR WHOLESALE SERVICES THAT**
5 **ALLOW POTENTIAL RESELLERS TO REACH) EVERY SINGLE**
6 **MASS-MARKET CUSTOMER IN A GIVEN WIRE CENTER?**

7 A. No. The Commission should, however, require evidence that: (1) each
8 company counted toward the retail trigger has a demonstrated capability of
9 holding itself out to provide retail local exchange service to all, or
10 virtually all, mass-market customers within that wire center; and (2) the
11 volumes at which the potential triggering company is presently providing
12 service demonstrate that it has overcome the hot cut barrier to entry that is
13 the basis for the national finding of impairment and all of the other
14 economic and operational barriers to entry that the FCC identified as
15 appropriate topics for consideration in a potential deployment analysis.
16 This means that the company in question must have demonstrated, by the
17 sheer scale and scope of its participation in the market, that it has
18 overcome the operational and technological issues associated with, *e.g.*,
19 UNE-L, OSS, collocation, transport and EELs necessary for mass-market
20 entry. If that is not unambiguously clear from the nature of the triggering
21 company's operations, then a potential deployment analysis would be
22 necessary to justify a finding of no impairment and no such finding should
23 be made on the basis of the existence of the alleged trigger company in the

1 relevant market. I have included these two evidentiary requirements as the
2 sixth and seventh, respectively, on the flowchart in Exhibit MTB-5.

3 **Q. ARE THERE BROAD CATEGORIES OF POTENTIAL**
4 **TRIGGERING COMPANIES THAT WOULD FAIL TO MEET**
5 **YOUR PROPOSED STANDARD OF HAVING A**
6 **DEMONSTRATED CAPABILITY OF HOLDING ITSELF OUT TO**
7 **PROVIDE RETAIL LOCAL EXCHANGE SERVICE TO ALL, OR**
8 **VIRTUALLY ALL, MASS-MARKET CUSTOMERS WITH THE**
9 **WIRE CENTER (ITEM 6 ON THE FLOWCHART IN EXHIBIT**
10 **MTB-5)?**

11 A. Yes. As I mentioned in discussing product market distinctions, at least two
12 broad categories come to mind:

13 (1) Companies that serve small business, but do not serve residential
14 customers; and

15 (2) Companies that serve customers whose ILEC loop is provided over
16 all-copper facilities, but do not serve customers whose ILEC loop
17 is provided over fiber feeder and IDLC.

1 **Q. WHY DO YOU SAY THAT COMPANIES THAT DO NOT SERVE**
2 **RESIDENTIAL CUSTOMERS IN A GIVEN GEOGRAPHIC**
3 **MARKET SHOULD *NOT* BE CONSIDERED AS POTENTIAL**
4 **“TRIGGERING” COMPETITORS?**

5 A. As I have already explained, residential customers are not identical to
6 small business customers, which in turn are not identical to the medium
7 and larger businesses that the FCC has included in what it describes as the
8 “enterprise market.”

9 The FCC recognized the “swing” role of small business customers
10 in the distinctions it drew between “mass-market” and “enterprise-market”
11 customers, noting:

12 Very small businesses typically purchase the same kinds of
13 services as do residential customers, and are marketed to,
14 and provided service and customer care, in a similar
15 manner. Therefore, we will usually include very small
16 businesses in the mass market for our analysis. We note,
17 however, that there are some differences between very
18 small businesses and residential customers. For example,
19 very small businesses usually pay higher retail rates, and
20 may be more likely to purchase additional services such as
21 multiple lines, vertical features, data services, and yellow
22 page listings. Therefore, we may include them with other
23 enterprise customers, where it is appropriate in our
24 analysis. *Triennial Review Order*, n. 432.

25 This statement, in combination with the FCC’s observations on the
26 use of actual marketplace deployment as evidence that barriers to entry are
27 surmountable, suggests that the Commission should allow the empirical
28 evidence to dictate its view of whether residential and small business
29 customers are in the same market for purposes of the trigger analysis. If a

1 carrier serves small business customers but not residential customers using
2 its own switch, that very fact implies that there is a meaningful difference
3 between small business and residential customers. If that pattern is
4 repeated, so that multiple carriers serve small business customers but not
5 residential customers using their own switches, the evidence for distinct
6 customer class markets becomes even more compelling.

7 It would be a grave public policy error to base a finding of no
8 impairment solely or largely on evidence of carriers self-deploying
9 switching to serve small business customers, leaving Florida residential
10 customers with no meaningful competitive alternative. The Commission
11 should require evidence that both residential and small business customers
12 have competitive choices before it decides to eliminate CLECs' access to
13 unbundled switching in any geographic market. Thus, a company that is
14 not actively providing residential service with its own switches (*i.e.*, one
15 that is only providing business service) should not be counted as a trigger
16 company for mass-market switching.

1 **Q. YOU ALSO SUGGESTED THAT THE COMMISSION SHOULD**
2 **CONSIDER WHETHER THE SWITCH-BASED COMPETITOR IS**
3 **OFFERING SERVICE OVER BOTH ALL-COPPER AND IDLC**
4 **LOOPS. WHY IS IT IMPORTANT FOR THE COMMISSION TO**
5 **CONSIDER THE TYPES OF UNE LOOPS OVER WHICH**
6 **POTENTIALLY TRIGGERING COMPANIES ARE PROVIDING**
7 **RETAIL LOCAL EXCHANGE SERVICE?**

8 A. ILECs and CLECs have engaged in a long and contentious battle over the
9 procedures and cost for providing stand-alone unbundled loops to
10 customer locations that the ILEC serves via fiber feeder and IDLC. To
11 date, there is no consensus on a cost-effective means for making such
12 loops available. There is, however, no dispute that UNE-P can be
13 provisioned over the same IDLC facilities that the ILEC uses to provide its
14 own retail services. Unless a potentially triggering company is providing
15 switch-based services to mass-market customers over IDLC as well as all-
16 copper loops, there is no actual marketplace evidence that the competitor
17 has overcome barriers to entry for customer locations served via IDLC.
18 Elimination of access to UNE switching under these circumstances would
19 effectively deny competitive alternatives to the growing number of Florida
20 customers served via IDLC.

1 Q. HOW DOES THE PRECEDING DISCUSSION RELATE TO THE
2 FLOWCHART IN EXHIBIT MTB-5?

3 A. I have identified two specific “screens” that should be considered during
4 the analysis that occurs as part of Item 7 in the flowchart. The first
5 “screen” asks whether the potential triggering carrier serves both
6 residential and small business customers. The second asks whether the
7 potential triggering carrier serves customers over both all-copper and
8 IDLC loops. The Commission should not consider the triggers to be
9 satisfied unless all customer groups within the identified market can be
10 reached by at least three retail or two wholesale providers that deploy their
11 own switches.

12 Q. MS. TIPTON HAS IDENTIFIED A NUMBER OF CLECs THAT
13 SHE CLAIMS MEET THE SELF-PROVISIONING TRIGGER. DO
14 YOU AGREE THAT THESE CARRIERS SHOULD BE COUNTED
15 AS TRIGGERING COMPANIES?

16 A. No. Several of the carriers cited by Ms. Tipton clearly do not actively
17 market services to residential customers. As I explained in my discussion
18 of the trigger “screens” above, these companies should be excluded from
19 the analysis. These companies are: ****BEGIN PROPRIETARY
20 INFORMATION**** [REDACTED]

21 [REDACTED]
22 [REDACTED]

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[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ****END PROPRIETARY INFORMATION****

Q. HOW DID YOU DETERMINE THAT THESE COMPANIES ARE NOT ACTIVELY MARKETING SERVICES TO RESIDENTIAL SUBSCRIBERS?

A. Very simply, I examined the marketing materials placed by these companies on their web sites. For each of the above companies, the description of services offered plainly indicated that their focus was on the provision of services to business customers.

****BEGIN PROPRIETARY INFORMATION**** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] ****END

PROPRIETARY INFORMATION****

1 I have attached to my rebuttal testimony Exhibit MTB-6. This
2 exhibit reproduces relevant pages from the web sites of ****BEGIN
3 PROPRIETARY INFORMATION**** [REDACTED]
4 [REDACTED] ****END PROPRIETARY
5 INFORMATION****

6 Q. ARE THERE COMPANIES OTHER THAN THE ONES THAT YOU
7 HAVE CITED THAT FAIL TO MEET THE CRITERIA FOR
8 TRIGGERING CLECs?

9 A. Yes. ****BEGIN PROPRIETARY INFORMATION**** [REDACTED]
10 [REDACTED] ****END
11 PROPRIETARY INFORMATION**** does not appear to be marketing
12 any kind of local exchange service. Attempting to access the ****BEGIN
13 PROPRIETARY INFORMATION**** [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED] ****END PROPRIETARY
17 INFORMATION****

18 Additionally, two companies, ****BEGIN PROPRIETARY
19 INFORMATION**** [REDACTED]
20 [REDACTED]
21 [REDACTED] ****END PROPRIETARY INFORMATION**** are cable

1 operators providing service via cable lines. For the reasons cited in my
2 earlier discussion regarding the provision of local phone service by cable
3 operators, these companies should not be counted toward the self-
4 provisioning triggers.

5 Finally, ****BEGIN PROPRIETARY INFORMATION**** [REDACTED]

6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED] ****END PROPRIETARY INFORMATION****

8 **Q. IS MCI A TRIGGERING COMPANY?**

9 A. Based on the rebuttal testimony of Ms. Sherry Lichtenberg, I believe that
10 MCI is not a triggering company. MCI provides service to residential and
11 small business customers using only UNE-P.

12 **Q. DO THE COMPANIES YOU HAVE DISCUSSED THUS FAR**
13 **EXHAUST THE LIST OF TRIGGERING COMPANIES CITED BY**
14 **BELLSOUTH?**

15 A. No. I was unable to determine the extent to which ****BEGIN
16 PROPRIETARY INFORMATION**** [REDACTED]
17 [REDACTED]
18 [REDACTED] ****END PROPRIETARY
19 INFORMATION actively market local exchange services to residential
20 customers.

1 **Q. CAN YOU SUMMARIZE YOUR CONCLUSIONS REGARDING**
2 **THE TRIGGER EVIDENCE PRESENTED BY BELL SOUTH?**

3 A. Yes. Of the twenty companies cited by BellSouth as satisfying the self-
4 provisioning trigger, I have been able to determine that fourteen obviously
5 do not meet the criteria for a triggering company. I have been unable to
6 determine whether or not the remaining six companies should qualify as
7 triggers. I have attached a summary of my conclusions as Exhibit MTB-8.

8 **III. REBUTTAL OF THE DIRECT TESTIMONY OF DR. FULP**
9 **(TRIGGERS)**

10 **Q. VERIZON HAS PRESENTED THE TESTIMONY OF DR.**
11 **ORVILLE FULP. WHAT IS THE SUBJECT OF DR. FULP’S**
12 **TESTIMONY?**

13 A. Dr. Fulp offers a proposed market definition, and presents evidence that he
14 claims support a finding that the triggers for self-provisioning of local
15 exchange switching have been met in Verizon territory.

16 **Q. WHAT MARKET DEFINITION DOES DR. FULP PROPOSE?**

17 A. Dr. Fulp proposes that the Commission adopt a market definition based on
18 Metropolitan Statistical Areas (“MSAs”), or alternatively, that the market
19 be defined as UNE rate zones within MSAs.

20 **Q. DO YOU AGREE WITH THE MARKET DEFINITION PROPOSED**
21 **BY DR. FULP?**

1 A. No, I do not. For the same reasons that BellSouth's proposed density
2 zones are not an appropriate market definition for evaluating the self-
3 provisioning triggers or the analysis of potential deployment, Verizon's
4 proposed market definition is equally deficient.

5 **Q. DR. FULP ALSO ARGUES AGAINST THE ADOPTION OF THE**
6 **WIRE CENTER AS THE APPROPRIATE MARKET DEFINITION.**
7 **ON WHAT BASIS DOES DR. FULP REJECT A WIRE CENTER**
8 **MARKET DEFINITION?**

9 A. Like Dr. Pleatsikas, Dr. Fulp believes that defining the market as the ILEC
10 wire center would fail to capture the economies of scale pertaining to
11 switch deployment. As I showed earlier, these economies of scale are not
12 significant once a certain level of demand is achieved, and consideration
13 of these costs certainly should preclude consideration of wire center
14 specific cost differences. Dr. Fulp goes further, however, and seems to
15 suggest that adoption of the ILEC wire center boundaries as the relevant
16 market would fail to recognize the network architecture that CLECs might
17 deploy. I disagree. Certainly the CLEC will endeavor to place its switches
18 in locations that permit it to operate most efficiently, and this can certainly
19 be taken into account in estimating CLEC costs. The fact is, however, that
20 CLECs are and will continue to be dependent upon the ILECs for access
21 to unbundled loops. These loops terminate in ILEC wire centers, and the
22 CLEC must inevitably take into account the network structure currently
23 deployed by the ILECs.

1 Q. DR. FULP ALSO LISTS COMPANIES THAT HE CLAIMS
2 SHOULD BE COUNTED AS TRIGGERS IN THE ACTUAL
3 DEPLOYMENT ANALYSIS. DO YOU AGREE THAT THE
4 COMPANIES HE LISTS QUALIFY AS TRIGGERING
5 COMPANIES?

6 A. No, I do not. Dr. Fulp identifies many of the same companies identified by
7 BellSouth in its triggers analysis. These include ****BEGIN
8 PROPRIETARY INFORMATION**** [REDACTED]
9 [REDACTED] ****END
10 PROPRIETARY INFORMATION**** Only one additional company not
11 identified in Ms. Tipton's testimony, ****BEGIN PROPRIETARY
12 INFORMATION**** [REDACTED] ****END PROPRIETARY
13 INFORMATION**** is identified by Dr. Fulp as operating in Verizon
14 territory. As I noted earlier, I have been unable to determine whether or
15 not ****BEGIN PROPRIETARY INFORMATION**** [REDACTED] ****END
16 PROPRIETARY INFORMATION**** is actively marketing UNE-L
17 based local exchange residential service in Florida, and I have also not
18 been able to locate any information regarding ****BEGIN
19 PROPRIETARY INFORMATION**** [REDACTED] ****END
20 PROPRIETARY INFORMATION**** The remaining companies
21 identified by Dr. Fulp are all either not actively marketing residential local
22 exchange service, are not using UNE-L to provide local exchange service,
23 or, in the case of ****BEGIN PROPRIETARY INFORMATION****

1 [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED] *****END PROPRIETARY INFORMATION***** Exhibit

5 MTB-9 presents a summary of my conclusions.

6
7 **IV. REBUTTAL OF THE DIRECT TESTIMONY OF MR. STEGEMAN**
8 **(POTENTIAL DEPLOYMENT MODEL)**

9 **Q. BELLSOUTH HAS PRESENTED THE BELLSOUTH ANALYSIS**
10 **OF COMPETITIVE ENTRY (“BACE”) MODEL THROUGH THE**
11 **TESTIMONY OF MR. STEGEMAN IN THIS PROCEEDING.**
12 **WHAT IS YOUR UNDERSTANDING OF THE PURPOSE OF THIS**
13 **MODEL?**

14 **A.** According to Mr. Stegeman and Dr. Aron, the model is presented to show
15 the feasibility of market entry to CLECs seeking to provide local exchange
16 service using their own switches in combination with certain unbundled
17 loop, transport, and collocation facilities obtained from the ILEC.

18 **Q. HAVE YOU BEEN ABLE TO ASSESS THE MODEL’S**
19 **METHODOLOGY AND CALCULATIONS?**

20 **A.** No, I have not. The model presented by BellSouth is a compiled Visual
21 Basic application. As such, none of the formulae or intermediate results of
22 calculations are accessible or viewable. BellSouth did not provide any of
23 the source code used in the model. Consequently, at this time the model is

1 a “black box.” I have only been able to view the effect that changes in
2 inputs have on the model’s outputs.

3 **Q. HOW DO THE MODEL’S INPUTS AFFECT THE MODEL’S**
4 **OUTPUTS?**

5 A. In testing the sensitivity of the model to various input changes, I was
6 surprised by how insensitive the model’s outputs are to the model inputs.
7 For example, I tested the model by changing inputs that should have a
8 dramatic impact on CLEC profitability. In particular, the customer churn
9 rate and the customer acquisition cost should be significant factors in
10 determining profitability. If the customer churn rate is high, or if the
11 customer acquisition cost is high, the CLEC will likely be unable to
12 recover customer specific costs from the revenue derived from each
13 customer during the time that the customer remains with the CLEC. The
14 CLEC’s cost of capital and the CLEC’s market share likewise should be
15 significant factors in determining profitability, in that they will affect the
16 CLEC’s ability to recover its capital expenditures for collocation and other
17 capital equipment, and the nonrecurring charges associated with
18 establishing collocation facilities and transport facilities.

19 Surprisingly, varying these inputs did little to change the net
20 present value of providing service in BellSouth wire centers. Using
21 BellSouth’s default inputs, but turning off certain filters used by the model
22 that eliminate unprofitable market segments, the BACE estimated that net

1 present value would be negative for mass market customers in 42 of 196
2 wire centers in BellSouth territory. Increasing the cost of capital from
3 BellSouth's default value of 13.09% to 15% caused only three additional
4 wire centers to produce negative net present value. Changes in the CLECs
5 market share had a somewhat greater effect on model results. Decreasing
6 market share from BellSouth's default value to 10% in all mass market
7 segments increased the number of negative net present value wire centers
8 from 42 to 59. Decreasing market share further to 5% in all mass market
9 segments resulted in a further increase in negative net present value wire
10 centers to 73.

11 Manipulating the customer churn rates also had a surprisingly
12 small effect on the model results. Keeping the cost of capital at 15%,
13 increasing monthly customer churn from BellSouth's default values to 5%
14 across all mass market customer segments increased the number of
15 negative net present value wire centers from 45 to 47. Increasing churn to
16 8.33% (representing a 12-month average customer life) increased the
17 number of unprofitable wire centers only to 56.

18 I have attached to this testimony Exhibit MTB-10, which presents
19 the results of several sensitivity tests that I performed on the BACE
20 model.

21 **Q. WHAT DO YOU CONCLUDE FROM THE SENSITIVITY TESTS**
22 **THAT YOU HAVE PERFORMED?**

1 A. Without access to the model algorithms and the results of intermediate
2 calculations, I cannot say with any certainty whether the model is
3 appropriately calculating the costs and revenues pertinent to the potential
4 deployment analysis. While, with one or two exceptions that I discuss
5 below, I cannot fault the general approach outlined in Mr. Stegeman's
6 testimony and in the model documentation, I find it curious that factors
7 that are known to have a significant impact on CLEC profitability do not
8 seem to have a significant impact on CLEC profitability as predicted by
9 the model.

10 **Q. DO YOU HAVE ANY OTHER CONCERNS WITH THE**
11 **OPERATION OF THE BACE MODEL?**

12 A. Yes. In testing the sensitivity of the model to various inputs, I discovered
13 that the model occasionally produces anomalous results. That is to say, in
14 some cases the output of the model does not change in ways that would be
15 anticipated with changes in inputs.

16 For example, one would expect that increases in customer churn
17 would result in a decrease in profitability for the CLEC, all else equal. In
18 one pair of model runs that I performed, I changed the customer churn rate
19 from 6.5% to 8.33%. All other inputs to the model were held constant.
20 While most wire centers in Florida did indeed become less profitable with
21 this change, the BACE predicted that in 29 wire centers, the CLEC would
22 actually be *more* profitable with the higher churn rate.

1 I cannot account for this result, and it certainly raises questions as
2 to whether the model accurately calculates the effect of customer churn
3 rates or other variables.

4 Q. **DOES THE MODEL ACCURATELY PORTRAY THE**
5 **CHALLENGES FACED BY CLECs IN PROVIDING LOCAL**
6 **EXCHANGE SERVICES UNDER SUCH CIRCUMSTANCES?**

7 A. No, it does not, in its default configuration. An analysis of the inputs used
8 in the model and the overall operation of the model reveals a number of
9 aspects of the model that cause it to present misleading and inaccurate
10 results.

11 Q. **HOW DOES THE MODEL PRESENT MISLEADING RESULTS IN**
12 **ITS DEFAULT CONFIGURATION?**

13 A. A part of the problem is that the BACE, operated with default inputs,
14 discards certain markets where CLEC entry is, on the model's own terms,
15 unprofitable. The default inputs used in the model cause the model to
16 discard: 1) LATAs for which CLEC entry is unprofitable, 2) markets for
17 which CLEC entry is unprofitable, and 3) customers that may not
18 profitably be served. The results of these exclusions is that the model
19 results portray CLEC entry as more profitable than is actually, under the
20 model's own terms, the case.

1 A second aspect of the problem lies in the market definition
2 proposed by BellSouth and in the way that the model aggregates results to
3 conform to this market definition. The model performs this aggregation in
4 two ways. First, although the model calculates results separately for the
5 mass market and enterprise market in each wire center, it aggregates
6 results for these two product markets into a single value. Second, although
7 the model operates fundamentally at the level of the individual wire
8 center, it aggregates the results for all wire centers in each of BellSouth's
9 proposed market areas into a single value. The result is that the model
10 result presented by BellSouth obscures differences in the profitability of
11 the enterprise and mass markets, and in the profitability of each wire
12 center in a manner that in turn obscures factors that enter into each
13 CLEC's decision whether or not to enter a given market. Exhibit MTB-11
14 to this testimony presents the results of the BACE model, using
15 BellSouth's default inputs with the exclusionary filters turned off, for the
16 individual wire centers in each of BellSouth's proposed markets. Given
17 BellSouth's optimistic assumptions, very few of the wire centers shown in
18 the results have a negative net present value. Note, however, the results for
19 the PLCSFLMA wire center in the Daytona Beach "market." The BACE
20 results, as presented by BellSouth, would lead one to a conclusion that this
21 wire center is profitable for a potential CLEC entrant (the wire center as a
22 whole is profitable). This conclusion is only reached, however, because
23 the large net present value derived from serving enterprise customers

1 offsets the loss that the CLEC would incur from serving mass market
2 customers. While this issue does not affect many wire centers using
3 BellSouth's default input assumptions, the effect is much more
4 pronounced when the input assumptions used result in a lower profitability
5 for mass market customers.

6 **Q. ARE YOU SAYING THAT IT IS INAPPROPRIATE TO**
7 **CONSIDER THE CASE WHERE A CLEC SERVES BOTH**
8 **ENTERPRISE AND MASS MARKET CUSTOMERS?**

9 A. No, I am not. In fact, the FCC's Triennial Review Order, at ¶519 requires
10 that the potential deployment analysis consider this case. What is
11 inappropriate in BellSouth's presentation is that it suggests that a CLEC
12 would offer services to mass market customers where it would not be
13 profitable to do so. The appropriate consideration is whether the
14 simultaneous offering of enterprise and mass market services reduces cost
15 and increases profitability for each market relative to the offering of
16 service to either market separately. In other words, the relevant question is
17 whether a carrier offering enterprise services would gain additional
18 economies of scale by also offering mass market services, or *vice versa*.
19 No rational firm, however, would provide service to a market if that
20 service offering would reduce its overall profitability.

21 **V. REBUTTAL OF THE DIRECT TESTIMONY OF DR. ARON**
22 **(POTENTIAL DEPLOYMENT)**

1 **Q. DR. DEBRA ARON HAS PRESENTED TESTIMONY ENDORSING**
2 **THE APPROACH TAKEN BY THE BACE IN ESTIMATING THE**
3 **CLECS' PROFITABILITY IN OFFERING LOCAL EXCHANGE**
4 **SERVICE USING THEIR OWN SWITCHES. DO YOU DISAGREE**
5 **WITH DR. ARON'S STATEMENTS IN THIS REGARD?**

6 A. As I have already stated, I do not disagree with the general approach to
7 estimating CLEC profitability outlined in Dr. Aron's and Mr. Stegeman's
8 testimony. I also have stated concerns with the manner in which this
9 approach is implemented by the model.

10 **Q. DR. ARON ALSO PROPOSES A NUMBER OF INPUTS TO THE**
11 **MODEL THAT SHE CLAIMS SHOULD BE USED IN THE**
12 **POTENTIAL DEPLOYMENT ANALYSIS. DO YOU AGREE WITH**
13 **DR. ARON'S RECOMMENDATIONS?**

14 A. No, I do not. Many of the input assumptions proposed by Dr. Aron for use
15 in the BACE model are unrealistic, and represent a quite optimistic view
16 of the challenges that would face CLECs in a post-UNE-P environment.

17 **Q. AS JUSTIFICATION FOR CHOOSING VALUES THAT DO NOT**
18 **REFLECT CURRENT CLEC EXPERIENCE, DR. ARON STATES**
19 **THAT THE FACT THAT SEVERAL CLECS HAVE GONE**
20 **BANKRUPT SUGGESTS THAT "...ON AVERAGE, CLECS DO**
21 **NOT HAVE OPTIMALLY EFFICIENT OPERATIONS." DO YOU**
22 **AGREE?**

1 A. Certainly not. If anything, it should suggest the opposite. Any firm faced
2 with bankruptcy will do anything it can to cut operating expenses in an
3 effort to remain solvent. This may not be an “optimally efficient” mode of
4 operation, but it would be suboptimal to the low side; the operating
5 expense would not reflect the level of expense that would be expected for
6 an efficient firm in sustainable operation.

7 **Q. DR. ARON RECOMMENDS THAT THE ULTIMATE MARKET**
8 **SHARE FOR THE EFFICIENT CLEC BE SET AT 15% OVER ALL**
9 **MARKET SEGMENTS. DO YOU AGREE WITH THIS**
10 **RECOMMENDATION.**

11 A. No, I do not. Dr. Aron cites penetration levels achieved by CLECs using
12 UNE-P to provide local exchange service and penetration levels by cable
13 operators achieved among customers that subscribe to cable as
14 justification for her recommendation. I would note first that the 15%
15 market share number cited for CLEC market penetration is for all CLECs
16 in aggregate, not for individual CLECs (with the exception of the
17 penetration cited for AT&T in New York). I also would note that the cable
18 penetration figures are for penetration among only those customers that
19 are subscribers to the cable system, with a total subscriber base only of
20 those subscribers for whom cable services are available – not the entire
21 universe of telephone subscribers. Nationwide, CLECs, *in aggregate*, have
22 achieved a market penetration to date of just under 15%. If the FCC has
23 established as a benchmark the presence of three unaffiliated retail

1 providers of local exchange service, this would imply a market share for
2 each carrier of only 5%, assuming each is equally successful in winning
3 customers' business.

4 In view of the challenges that will face CLECs in moving from a
5 UNE-P based service to a service based on self-provisioning of the
6 switching function, and in view of the increasingly aggressive winback
7 activities being pursued by ILECs, including BellSouth, I believe that a
8 15% market share projection is far too aggressive. The ultimate market
9 share that an individual CLEC may achieve is unknown and unknowable,
10 depending as it does on many uncertain factors, including the price that
11 the CLEC is able to establish relative to the ILEC, the quality of service
12 that the CLEC is able to provide (a factor that is only partly under the
13 control of the CLEC, because the loop and transport components of the
14 service will remain under the control of the ILEC, from a technical
15 perspective), the ability of the ILEC to efficiently manage the hot cut
16 process, and the ability of the CLEC to bring new products and service
17 capability to the market and the cost of doing so. Additionally, as I have
18 discussed earlier in this testimony, the FCC's decision to preclude CLECs
19 from obtaining access to the broadband data capabilities of hybrid
20 fiber/copper loops means that CLECs will be unable to serve a large and
21 increasingly important segment of the market, particularly higher-
22 spending residential and small business customers, who will demand
23 broadband data services.

1 **Q. DR. ARON ALSO RECOMMENDS A CHURN RATE OF 4% PER**
2 **MONTH FOR RESIDENTIAL CUSTOMERS. DO YOU AGREE**
3 **WITH THIS RECOMMENDATION?**

4 A. No, I do not. The same factors that I have discussed with regard to the
5 market share that will be attainable by CLECs in the post-UNE-P market
6 apply as well to the churn rate that CLECs will experience. Any input to
7 the model that relies exclusively on the experience of UNE-P based
8 CLECs will likely understate the actual churn rates that will be
9 experienced going forward. Again, the actual churn rate is unknown and
10 unknowable at this time. In making its findings regarding potential
11 deployment, the Commission should consider a range of possibilities,
12 including scenarios that increase the level of churn over historical levels.

13 **Q. DR. ARON CITES SEVERAL ANALYST’S REPORTS TO**
14 **SUPPORT HER RECOMMENDED CUSTOMER ACQUISITION**
15 **COST OF \$95. DO YOU AGREE WITH THIS**
16 **RECOMMENDATION?**

17 A. No, I do not. Dr. Aron cites a number of sources, including (at the low
18 end) a reference to ZTel’s estimated customer acquisition costs that does
19 not include advertising. She goes on to claim that an efficient UNE-L
20 based CLEC would likely incur lower customer acquisition costs than
21 current UNE-P based CLECs.

1 In supporting a customer acquisition input of \$130, Dr. Gabel cites
2 in notes attached to his model a range of estimates from the same types of
3 sources cited by Dr. Aron. These estimates range from \$80 to more than
4 \$400 per customer, a range higher at the low end and much higher at the
5 high end than the estimates provided by Dr. Aron.

6 Again, customer acquisition cost in a post-UNE-P market is an
7 unknown and unknowable quantity. Some of the factors that I already
8 have discussed with regard to market share and churn also will have an
9 impact on customer acquisition costs, particularly the price that the CLEC
10 will be able to establish relative to the ILEC's price, the aggressiveness of
11 ILEC winback efforts, and the quality of service that the CLECs are able
12 to attain. Given that the range of estimates for current CLEC customer
13 acquisition cost varies so widely, I believe that it would be prudent for the
14 Commission to consider a range of scenarios with regard to customer
15 acquisition costs, including scenarios where customer acquisition costs in
16 the post-UNE-P market substantially exceed those for UNE-P based
17 CLECs.

18 **VI. RESULTS OF RUNNING BST MODEL WITH MORE REALISTIC**
19 **INPUTS, AND WITH THE CORRECT WIRE CENTER MARKET**
20 **DEFINITION.**

21 **Q. DR. BRYANT, IN YOUR DIRECT TESTIMONY YOU**
22 **PRESENTED THE RESULTS OF THE IMPAIRMENT ANALYSIS**
23 **TOOL THAT YOU SUBMITTED USING A RANGE OF POSSIBLE**

1 **INPUTS, SHOWING THE RESULT FOR A NUMBER OF**
2 **POSSIBLE SCENARIOS. HAVE YOU PERFORMED A SIMILAR**
3 **ANALYSIS USING THE BACE?**

4 A. Not in the same way. Because the impairment analysis tool calculates
5 results relatively quickly, it was possible to evaluate several hundred
6 randomly-generated scenarios in a relatively short period of time. The
7 BACE is a more complex model, and takes approximately 40 minutes to
8 produce results for any set of specified inputs. Due to the short time
9 frames in this proceeding and the press of similar proceedings in other
10 states, I was not able to produce the same type of analysis using the BACE
11 as I presented using the impairment analysis tool.

12 I have already presented in Exhibit MTB-10 a summary of the
13 results of a sensitivity analysis that I performed for several individual user
14 inputs to the model. I have also performed a series of runs of the model
15 using combinations of certain key variables. The results of this analysis
16 are shown in Exhibit MTB-12. Each column in this exhibits presents the
17 model results for the mass market customers in each wire center. For all
18 model runs, BellSouth's exclusionary filters were turned off. The column
19 header in each of the columns show the user inputs that were changed
20 from BellSouth's default values.

21 **Q. IN THIS EXHIBIT, YOU USE A MONTHLY REVENUE OF \$47.25.**
22 **WHAT DOES THIS VALUE MEAN?**

1 A. MCI recently has obtained data from TNS Telecoms on the monthly
2 average residential telecommunications spending by household for each
3 wire center in Florida. This is the same source of information that is used
4 by the FCC in compiling its annual statistics on telecommunications
5 expenditures, and is based on a survey of actual customer bills. The
6 \$47.25 value that I used is the weighted average household spending for
7 local and long distance services, and includes the subscriber line charge
8 and taxes. As such, it likely overstates the actual current spending by
9 residential consumers on a per-line basis. This value was applied only to
10 the residential revenue inputs in the BACE model. Business revenues were
11 left at BellSouth default values.

12 **Q. WHAT DOES YOUR ANALYSIS SHOW?**

13 A. It is difficult to draw conclusions from my analysis. Due to the lack of
14 sensitivity of the model to certain key inputs, and the occasional
15 anomalous results that the model produces, I do not have confidence in the
16 ability of the model to produce valid results. However, just as in the
17 analysis that I presented in my direct testimony, the results are both highly
18 variable among wire centers and overall quite dependent upon the inputs
19 values chosen. Exhibit MTB-12 shows that, depending upon the input
20 values chosen, CLECs are not profitable in varying numbers of wire
21 centers in BellSouth's territory in Florida.

1 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS REGARDING**
2 **THE BACE MODEL.**

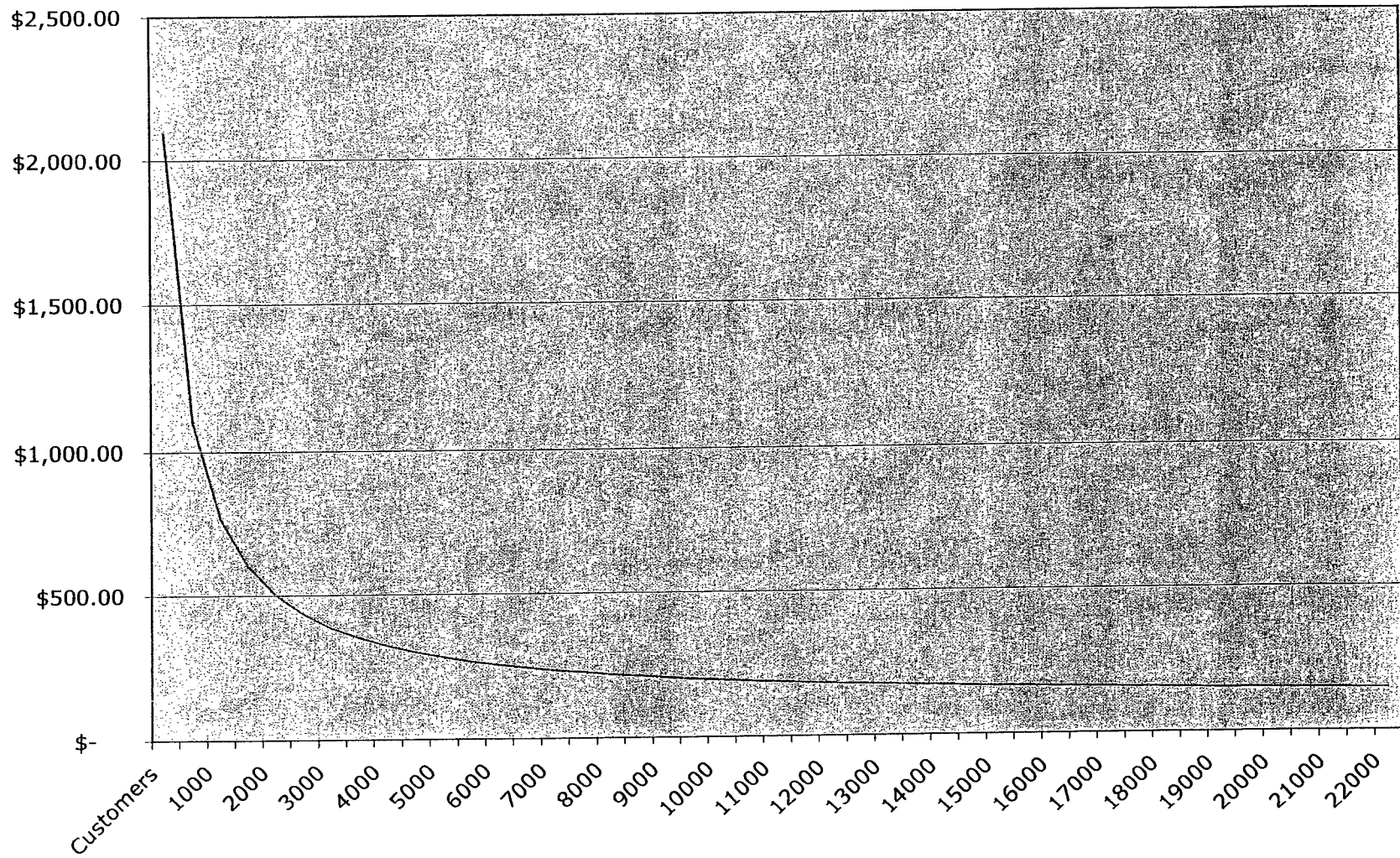
3 A. Having had only a limited amount of time to work with the model, and
4 without access to the source code or intermediate calculations produced by
5 the model, I am not in a position at this time to either endorse or reject the
6 model itself. As I have discussed in this testimony, there are aspects of the
7 model's operation and the relationship between inputs to the model and
8 the outputs the model produces that raise serious questions as to whether
9 the model accurately and reliably calculates the costs and revenues that are
10 pertinent to a CLEC's decision to provide local exchange service using
11 self-provisioned switches.

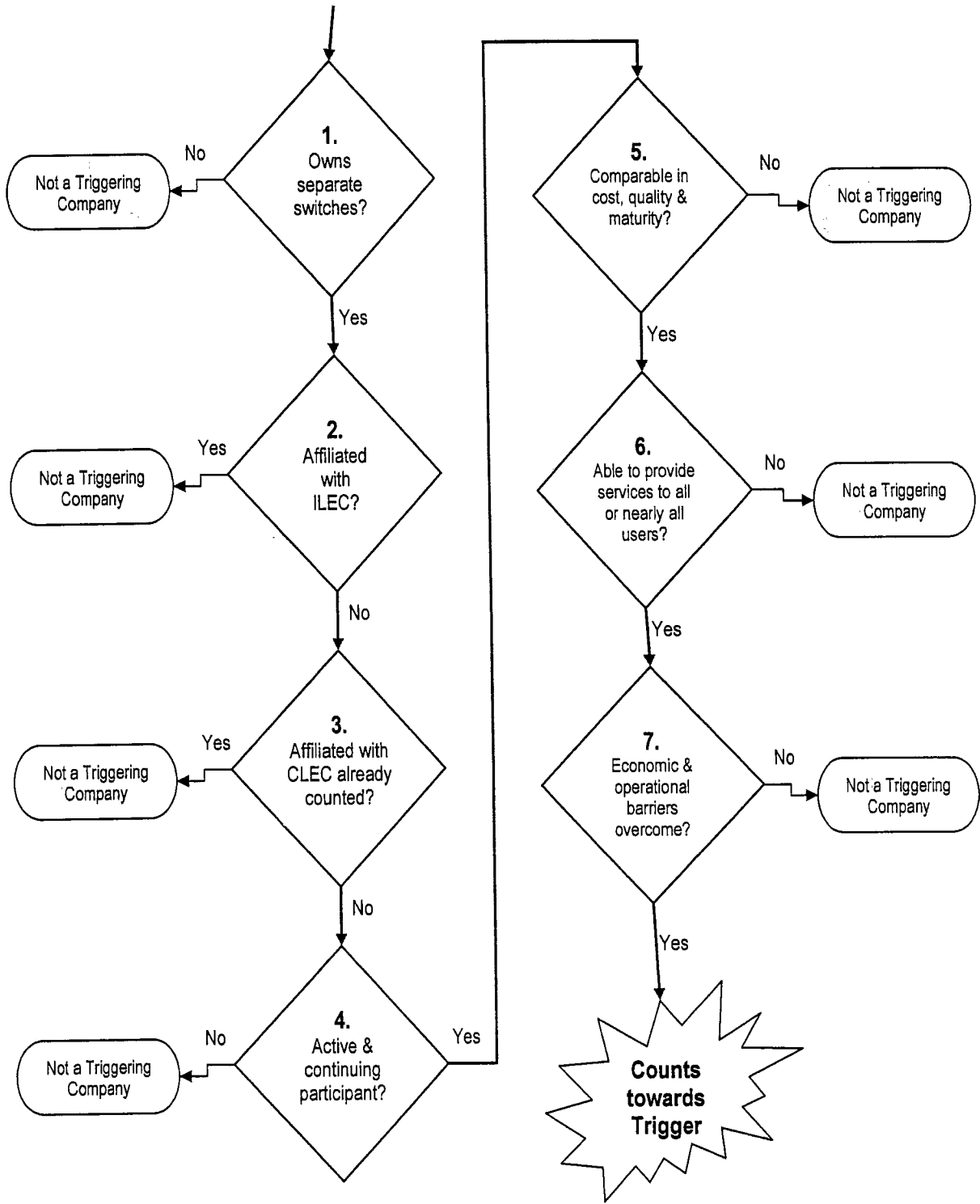
12 I would emphasize again that many of the inputs to the model are
13 uncertain – it cannot be known with any certainty what costs would be
14 incurred and what revenues would be available to CLECs in a post-UNE-P
15 environment. The best that can be said, whatever model is used, is that
16 under some sets of assumptions, CLECs can be profitable in some wire
17 centers in Florida. Under other sets of assumptions, CLECs are not
18 profitable in any wire center in Florida. Given this uncertainty, the
19 Commission cannot conclude that CLECs are not impaired in any market
20 in Florida.

21 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

22 A. Yes, it does.

Investment Per Customer - Local Switching





SUMMARY OF MARK BRYANT
CONFIDENTIAL EXHIBITS

Copies are not being provided in the Public or Redacted version of the testimony

The Confidential exhibits not included in this testimony are:

Docket No. 030851-TP
Mark Bryant Rebuttal Exhibit ____ (MTB-6)
CONFIDENTIAL – CLEC Marketing Information
7 Total Pages, all confidential

Docket No. 030851-TP
Mark Bryant Rebuttal Exhibit ____ (MTB-7)
CONFIDENTIAL – News Article
2 Total Pages, all confidential

Docket No. 030851-TP
Mark Bryant Rebuttal Exhibit ____ (MTB-8)
CONFIDENTIAL – Triggering Companies, BellSouth
2 Total Pages, all confidential

Docket No. 030851-TP
Mark Bryant Rebuttal Exhibit ____ (MTB-9)
CONFIDENTIAL – Triggering Companies, Verizon
1 Page Total, all confidential

Model Assumptions	Number of Wire Centers with Negative Net Present Value	% of Wire Centers with Negative Net Present Value
BS Default - No Exclusions	42	21.4%
CLEC Capital Cost @ 15%	45	23.0%
CLEC Capital Cost @ 17%	46	23.5%
Monthly Churn (res) at 5%, Capital Cost at 15%	47	24.0%
Monthly Churn (res) at 6.5%, Capital Cost at 15%	53	27.0%
Monthly Churn (res) at 8.33%., Capital Cost @ 15%	56	28.6%
Capital Structure 50/50	45	23.0%
Mkt Share all MM segments 10%, slow penetration	59	30.1%
Mkt Share all MM segments 5%, slow penetration	73	37.2%
Res Sales cost @ \$140	51	26.0%

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Mkt Share all MM segments 10%, slow penetration	59	30.1%
Mkt Share all MM segments 5%, slow penetration	73	37.2%
Res Sales cost @ \$140	51	26.0%

BST Default Inputs

Include all LATAs, customers, markets, report by wire centers, separately for MM and Enterprise

Wire Center	Net Present Value	NPV for Mass Market	NPV for Enterprise	Zone	CEA
DYBHFLFN	\$179,140.21	80,594.33	98,545.89	Zone1	Daytona Beach FL
DBRYFLDL	\$824,828.18	774,399.01	50,429.17	Zone2	Daytona Beach FL
DBRYFLMA	\$462,363.73	416,661.19	45,702.54	Zone2	Daytona Beach FL
DELDFLMA	\$1,352,383.10	1,043,135.21	309,247.88	Zone2	Daytona Beach FL
DYBHFLMA	\$2,226,829.88	1,302,328.57	924,501.31	Zone2	Daytona Beach FL
DYBHFLOB	\$1,821,821.20	1,350,122.38	471,698.82	Zone2	Daytona Beach FL
DYBHFLOS	\$196,460.42	183,699.51	12,760.92	Zone2	Daytona Beach FL
DYBHFLOPO	\$1,969,686.88	1,565,299.15	404,387.73	Zone2	Daytona Beach FL
FLBHFLMA	\$185,680.38	87,745.16	97,935.22	Zone2	Daytona Beach FL
NSBHFLMA	\$1,316,873.77	1,010,089.04	306,784.73	Zone2	Daytona Beach FL
Total	\$10,356,927.54	\$7,733,479.22	\$2,623,448.32		
BNNFLMA	(\$43,187.71)	(44,811.76)	1,624.05	Zone3	Daytona Beach FL
DLSPFLMA	(\$92,548.40)	(88,494.94)	(4,053.47)	Zone3	Daytona Beach FL
OKHLFLMA	(\$100,803.34)	(99,464.01)	(1,339.33)	Zone3	Daytona Beach FL
PLCSFLMA	\$152,583.39	(32,171.92)	184,755.31	Zone3	Daytona Beach FL
PRSNFLFD	(\$130,637.63)	(124,379.24)	(6,258.39)	Zone3	Daytona Beach FL
Total	(\$214,593.68)	(\$389,321.86)	\$174,728.17		
CHPLFLJA	(\$184,661.14)	(188,319.64)	3,658.50	Zone3	Dothan AL-FL-GA
SYHSFLCC	(\$178,690.54)	(180,687.15)	1,996.61	Zone3	Dothan AL-FL-GA
VERNFLMA	(\$163,625.78)	(151,830.97)	(11,794.81)	Zone3	Dothan AL-FL-GA
Total	(\$526,977.45)	(\$520,837.75)	(\$6,139.70)		
FTLDFLCR	\$4,160,626.17	3,407,799.43	752,826.74	Zone1	Fort Lauderdale FL
FTLDFLCY	\$3,758,349.93	2,550,604.16	1,207,745.77	Zone1	Fort Lauderdale FL
FTLDFLMR	\$8,054,211.49	4,508,559.92	3,545,651.57	Zone1	Fort Lauderdale FL
FTLDFLFO	\$5,598,595.76	4,503,292.90	1,095,302.86	Zone1	Fort Lauderdale FL
FTLDFLSG	\$867,295.78	152,563.51	714,732.27	Zone1	Fort Lauderdale FL
FTLDFLSU	\$3,832,685.73	3,132,217.76	700,467.97	Zone1	Fort Lauderdale FL
HLWDFLHA	\$2,566,533.32	2,172,408.88	394,124.44	Zone1	Fort Lauderdale FL
HLWDFLMA	\$4,785,881.58	3,576,072.07	1,209,809.52	Zone1	Fort Lauderdale FL
PMBHFLTA	\$3,367,554.06	2,860,525.47	507,028.59	Zone1	Fort Lauderdale FL
Total	\$36,991,733.83	\$26,864,044.11	\$10,127,689.73		
DRBHFLMA	\$4,353,826.15	3,488,621.80	865,204.34	Zone2	Fort Lauderdale FL
FTLDFLJA	\$5,852,086.18	4,940,554.71	911,531.48	Zone2	Fort Lauderdale FL
FTLDFLPL	\$5,024,936.94	4,042,930.74	982,006.19	Zone2	Fort Lauderdale FL
FTLDFLWN	\$3,413,418.24	2,901,565.80	511,852.44	Zone2	Fort Lauderdale FL
HLWDFLPE	\$11,144,945.38	9,613,384.83	1,531,560.55	Zone2	Fort Lauderdale FL
HLWDFLWH	\$7,093,469.08	5,764,723.30	1,328,745.78	Zone2	Fort Lauderdale FL
PMBHFLCS	\$8,065,471.06	6,906,632.11	1,158,838.95	Zone2	Fort Lauderdale FL
PMBHFLFE	\$5,581,453.85	4,015,794.22	1,565,659.64	Zone2	Fort Lauderdale FL
PMBHFLMA	\$6,129,779.96	4,390,428.86	1,739,351.09	Zone2	Fort Lauderdale FL
Total	\$56,659,386.84	\$46,064,636.37	\$10,594,750.47		
HBSDFLMA	\$604,579.23	538,237.92	66,341.32	Zone2	Fort Pierce-Port St. Lucie FL
HTISFLMA	\$970,068.00	879,427.22	90,640.78	Zone2	Fort Pierce-Port St. Lucie FL
PTSLFLSO	\$1,191,048.89	930,747.45	260,301.44	Zone2	Fort Pierce-Port St. Lucie FL
STRNFLMA	\$5,406,346.28	3,966,777.03	1,439,569.25	Zone2	Fort Pierce-Port St. Lucie FL
VRBHFLBE	\$1,025,554.84	868,073.49	157,481.34	Zone2	Fort Pierce-Port St. Lucie FL
VRBHFLMA	\$3,687,354.15	2,406,062.74	1,281,291.41	Zone2	Fort Pierce-Port St. Lucie FL
Total	\$12,884,951.39	\$9,589,325.85	\$3,295,625.54		
FTPRFLMA	\$987,378.97	457,396.23	529,982.73	Zone3	Fort Pierce-Port St. Lucie FL
PTSLFLMA	\$1,632,422.48	1,358,377.66	274,044.83	Zone3	Fort Pierce-Port St. Lucie FL
SBSTFLFE	(\$88,108.45)	(66,472.03)	(21,636.43)	Zone3	Fort Pierce-Port St. Lucie FL
SBSTFLMA	\$45,268.38	11,230.48	34,037.91	Zone3	Fort Pierce-Port St. Lucie FL
Total	\$2,576,961.38	\$1,760,532.34	\$816,429.04		
GSVFLMA	\$4,818,533.82	3,667,854.62	1,150,679.20	Zone2	Gainesville FL
GSVFLNWN	\$1,005,643.46	805,350.83	200,292.63	Zone2	Gainesville FL
Total	\$5,824,177.28	\$4,473,205.46	\$1,350,971.83		

ARCHFLMA	(\$152,052.08)	(148,068.68)	(3,983.40)	Zone3	Gainesville FL
BRSNFLMA	(\$121,541.38)	(125,565.30)	4,023.91	Zone3	Gainesville FL
CDKYFLMA	(\$88,385.78)	(70,945.06)	(17,440.73)	Zone3	Gainesville FL
CFLDFLMA	(\$160,569.31)	(150,914.88)	(9,654.43)	Zone3	Gainesville FL
CSCYFLBA	(\$90,546.30)	(80,767.06)	(9,779.25)	Zone3	Gainesville FL
HWTHFLMA	(\$130,423.94)	(123,729.18)	(6,694.76)	Zone3	Gainesville FL
LKCYFLMA	\$503,552.89	193,707.02	309,845.87	Zone3	Gainesville FL
MCNPFLMA	(\$96,348.26)	(90,714.64)	(5,633.63)	Zone3	Gainesville FL
NWBYFLMA	(\$110,535.24)	(106,338.53)	(4,196.71)	Zone3	Gainesville FL
OLTWFLLN	(\$235,203.88)	(238,087.81)	2,883.93	Zone3	Gainesville FL
PLTKFLMA	\$230,159.59	102,056.98	128,102.61	Zone3	Gainesville FL
PMPKFLMA	(\$159,355.06)	(160,576.69)	1,221.63	Zone3	Gainesville FL
TRENFLMA	(\$131,528.47)	(128,306.17)	(3,222.30)	Zone3	Gainesville FL
WELKFLMA	(\$182,412.48)	(165,366.10)	(17,046.38)	Zone3	Gainesville FL
YNTWFLMA	(\$98,458.28)	(95,227.66)	(3,230.62)	Zone3	Gainesville FL
Total	(\$1,023,647.99)	(\$1,388,843.75)	\$365,195.76		
JCBHFLSP	\$1,068,109.31	976,952.20	91,157.11	Zone1	Jacksonville FL-GA
JCVLFLCL	\$3,612,454.69	1,536,197.76	2,076,256.93	Zone1	Jacksonville FL-GA
JCVLFLFC	\$1,573,102.58	1,379,325.07	193,777.51	Zone1	Jacksonville FL-GA
JCVLFLJT	\$605,162.53	81,521.01	523,641.52	Zone1	Jacksonville FL-GA
JCVLFLSM	\$2,389,267.97	921,031.10	1,468,236.87	Zone1	Jacksonville FL-GA
Total	\$9,248,097.08	\$4,895,027.14	\$4,353,069.94		
FRBHFLFP	\$1,205,974.14	1,028,905.82	177,068.32	Zone2	Jacksonville FL-GA
JCBHFLAB	\$1,082,512.41	1,048,767.16	33,745.25	Zone2	Jacksonville FL-GA
JCBHFLMA	\$2,174,970.93	1,796,026.15	378,944.77	Zone2	Jacksonville FL-GA
JCVLFLAR	\$1,706,849.98	1,350,163.55	356,686.42	Zone2	Jacksonville FL-GA
JCVLFLBW	\$2,864,864.23	2,296,728.27	568,135.96	Zone2	Jacksonville FL-GA
JCVLFLIA	\$211,590.51	20,299.99	191,290.52	Zone2	Jacksonville FL-GA
JCVLFLNO	\$1,923,940.15	1,422,487.35	501,452.80	Zone2	Jacksonville FL-GA
JCVLFLRV	\$1,924,868.43	1,380,986.00	543,882.43	Zone2	Jacksonville FL-GA
JCVLFLSJ	\$2,335,304.60	1,618,789.10	716,515.49	Zone2	Jacksonville FL-GA
JCVLFLWC	\$3,038,306.32	2,525,706.97	512,599.35	Zone2	Jacksonville FL-GA
MNDRFLAV	\$714,769.36	463,234.13	251,535.23	Zone2	Jacksonville FL-GA
MNDRFLLO	\$2,916,350.25	2,173,307.27	743,042.98	Zone2	Jacksonville FL-GA
ORPKFLMA	\$2,193,174.83	1,802,105.16	391,069.67	Zone2	Jacksonville FL-GA
ORPKFLRW	\$1,212,296.42	935,737.39	276,559.02	Zone2	Jacksonville FL-GA
PNVDFLMA	\$1,729,179.23	1,366,526.88	362,652.35	Zone2	Jacksonville FL-GA
STAGFLBS	\$745,798.84	639,524.33	106,274.51	Zone2	Jacksonville FL-GA
STAGFLSH	\$629,025.69	551,170.66	77,855.02	Zone2	Jacksonville FL-GA
Total	\$28,609,776.31	\$22,420,466.19	\$6,189,310.11		
BLDWFLMA	(\$13,489.19)	(12,441.21)	(1,047.98)	Zone3	Jacksonville FL-GA
FTGRFLMA	(\$33,044.28)	(34,604.47)	1,560.19	Zone3	Jacksonville FL-GA
GCSPFLCN	\$108,050.84	84,476.96	23,573.87	Zone3	Jacksonville FL-GA
JCVLFLLF	\$473,124.39	316,119.80	157,004.60	Zone3	Jacksonville FL-GA
JCVLFLOW	\$384,454.00	127,543.21	256,910.79	Zone3	Jacksonville FL-GA
KYHGFLMA	(\$123,747.54)	(117,129.09)	(6,618.45)	Zone3	Jacksonville FL-GA
MDBGFLPM	\$227,120.16	205,535.66	21,584.50	Zone3	Jacksonville FL-GA
MNDRFLLW	\$450,432.37	452,950.34	(2,517.96)	Zone3	Jacksonville FL-GA
MXVLFLMA	(\$89,742.65)	(90,685.64)	942.99	Zone3	Jacksonville FL-GA
STAGFLMA	\$785,741.38	575,439.30	210,302.08	Zone3	Jacksonville FL-GA
STAGFLWG	(\$69,548.50)	(95,691.71)	26,143.21	Zone3	Jacksonville FL-GA
YULEFLMA	\$4,865.13	806.62	4,058.51	Zone3	Jacksonville FL-GA
Total	\$2,104,216.12	\$1,412,319.77	\$691,896.35		
CCBHFLAF	\$22,524.12	4,441.93	18,082.20	Zone2	Melbourne-Titusville-Palm Bay FL
CCBHFLMA	\$1,135,915.34	798,426.10	337,489.24	Zone2	Melbourne-Titusville-Palm Bay FL
COCOFLMA	\$1,654,465.56	1,311,531.17	342,934.39	Zone2	Melbourne-Titusville-Palm Bay FL
COCOFLME	\$828,508.36	670,010.64	158,497.72	Zone2	Melbourne-Titusville-Palm Bay FL
EGLLFLBG	\$3,250,415.48	2,563,509.90	686,905.59	Zone2	Melbourne-Titusville-Palm Bay FL
EGLLFLIH	\$1,101,347.42	976,858.79	124,488.63	Zone2	Melbourne-Titusville-Palm Bay FL
MICCFLLB	\$207,851.82	197,365.52	10,486.31	Zone2	Melbourne-Titusville-Palm Bay FL
MLBRFLMA	\$4,708,235.59	3,409,012.03	1,299,223.56	Zone2	Melbourne-Titusville-Palm Bay FL
TTVLFLMA	\$1,818,365.67	1,366,850.20	451,515.46	Zone2	Melbourne-Titusville-Palm Bay FL
Total	\$14,727,629.36	\$11,298,006.28	\$3,429,623.09		
KYWSFLMA	\$2,510,146.00	1,921,217.37	588,928.62	Zone1	Miami FL

MIAMFLAE	\$6,654,894.34	4,799,969.94	1,854,924.40	Zone1	Miami FL
MIAMFLAP	\$475,014.02	223,599.98	251,414.04	Zone1	Miami FL
MIAMFLBA	\$3,183,786.13	2,668,547.20	515,238.93	Zone1	Miami FL
MIAMFLBC	\$1,424,004.60	1,038,801.75	385,202.85	Zone1	Miami FL
MIAMFLBR	\$4,551,489.14	3,679,929.92	871,559.22	Zone1	Miami FL
MIAMFLDB	\$501,771.98	59,228.51	442,543.47	Zone1	Miami FL
MIAMFLFL	\$2,931,011.35	2,415,936.95	515,074.40	Zone1	Miami FL
MIAMFLGR	\$8,514,920.64	1,808,796.39	6,706,124.25	Zone1	Miami FL
MIAMFLIC	\$3,916,254.28	3,353,694.07	562,560.21	Zone1	Miami FL
MIAMFLKE	\$1,133,058.16	927,118.77	205,939.39	Zone1	Miami FL
MIAMFLME	\$1,745,436.99	1,070,988.16	674,448.84	Zone1	Miami FL
MIAMFLNM	\$2,856,704.77	2,277,285.67	579,419.10	Zone1	Miami FL
MIAMFLPB	\$4,271,150.38	3,008,246.40	1,262,903.97	Zone1	Miami FL
MIAMFLPL	\$8,272,180.54	3,239,688.57	5,032,491.97	Zone1	Miami FL
MIAMFLWD	\$6,345,345.66	6,005,108.67	340,236.99	Zone1	Miami FL
MIAMFLWM	\$4,897,699.32	3,417,209.02	1,480,490.30	Zone1	Miami FL
NDADFLAC	\$4,498,205.53	3,536,420.29	961,785.24	Zone1	Miami FL
NDADFLLOL	\$4,930,749.61	3,899,793.82	1,030,955.79	Zone1	Miami FL
Total	\$73,613,823.41	\$49,351,581.45	\$24,262,241.96		
ISLMFLMA	\$158,168.18	132,289.54	25,878.64	Zone2	Miami FL
KYLRFLLS	\$456,561.20	384,369.50	72,191.70	Zone2	Miami FL
KYLRFLMA	\$505,545.52	451,618.18	53,927.34	Zone2	Miami FL
MIAMFLAL	\$2,356,386.74	1,955,832.43	400,554.31	Zone2	Miami FL
MIAMFLCA	\$8,558,433.89	7,912,507.34	645,926.55	Zone2	Miami FL
MIAMFLHL	\$10,544,927.38	8,547,029.73	1,997,897.65	Zone2	Miami FL
MIAMFLNS	\$2,609,651.14	1,986,515.76	623,135.38	Zone2	Miami FL
MIAMFLLOL	\$2,775,210.63	2,226,453.67	548,756.96	Zone2	Miami FL
MIAMFLRR	\$5,009,521.21	3,800,513.42	1,209,007.79	Zone2	Miami FL
MIAMFLSH	\$3,248,596.99	2,584,752.38	663,844.62	Zone2	Miami FL
MIAMFLSO	\$5,657,175.29	4,475,257.99	1,181,917.30	Zone2	Miami FL
MRTHFLVE	\$622,565.75	472,075.56	150,490.19	Zone2	Miami FL
NDADFLBR	\$4,046,856.15	3,287,971.53	758,884.62	Zone2	Miami FL
NDADFLGG	\$3,082,450.18	2,223,689.50	858,760.68	Zone2	Miami FL
NKLRFLMA	\$93,541.30	87,676.58	5,864.72	Zone2	Miami FL
PRRNFLMA	\$10,268,743.11	8,752,325.37	1,516,417.74	Zone2	Miami FL
Total	\$59,994,334.67	\$49,280,878.48	\$10,713,456.19		
BGPIFLMA	(\$109,300.10)	(80,464.96)	(28,835.14)	Zone3	Miami FL
HMSTFLEA	(\$34,129.05)	(33,084.10)	(1,044.96)	Zone3	Miami FL
HMSTFLHM	\$1,089,227.67	891,789.73	197,437.94	Zone3	Miami FL
HMSTFLNA	\$209,894.53	177,947.96	31,946.57	Zone3	Miami FL
SGKYFLMA	(\$101,979.58)	(75,564.88)	(26,414.69)	Zone3	Miami FL
DNLNFLWM	(\$358,466.72)	(335,068.50)	(23,398.22)	Zone3	Ocala FL
Total	\$695,246.75	\$545,555.25	\$149,691.51		
ORLDFLMA	\$5,488,561.98	2,615,360.80	2,873,201.17	Zone1	Orlando FL
LKMRFLMA	\$997,388.18	666,349.16	331,039.03	Zone2	Orlando FL
ORLDFLAP	\$7,335,126.55	6,454,171.74	880,954.81	Zone2	Orlando FL
ORLDFLCL	\$2,036,315.31	1,494,992.32	541,322.99	Zone2	Orlando FL
ORLDFLPC	\$5,731,773.79	4,062,473.19	1,669,300.60	Zone2	Orlando FL
ORLDFLPH	\$8,536,577.98	6,449,182.88	2,087,395.09	Zone2	Orlando FL
ORLDFLSA	\$2,942,837.24	1,498,573.31	1,444,263.94	Zone2	Orlando FL
OVIDFLCA	\$2,704,452.19	2,435,196.08	269,256.11	Zone2	Orlando FL
SNFRFLMA	\$4,781,283.94	3,695,544.60	1,085,739.34	Zone2	Orlando FL
Total	\$35,065,755.19	\$26,756,483.27	\$8,309,271.91		
EORNFLMA	(\$33,901.67)	(38,104.10)	4,202.42	Zone3	Orlando FL
GENVFLMA	(\$44,738.13)	(44,184.58)	(553.55)	Zone3	Orlando FL
Total	(\$78,639.80)	(\$82,288.67)	\$3,648.87		
PCBHFLNT	\$728,276.38	414,909.21	313,367.17	Zone2	Panama City FL
PNCYFLMA	\$1,643,324.37	982,686.66	660,637.71	Zone2	Panama City FL
Total	\$2,371,600.75	\$1,397,595.87	\$974,004.88		
LYHNFLLOH	(\$96,666.62)	(97,729.50)	1,062.88	Zone3	Panama City FL
PNCYFLCA	(\$340,919.19)	(331,203.87)	(9,715.32)	Zone3	Panama City FL
YNFNFLMA	(\$242,321.91)	(232,865.31)	(9,456.60)	Zone3	Panama City FL

Total	(\$679,907.72)	(\$661,798.68)	(\$18,109.03)		
GLBRFLMC	\$1,163,875.27	972,085.01	191,790.26	Zone2	Pensacola FL
PNSCFLBL	\$2,338,056.78	1,465,816.39	872,240.39	Zone2	Pensacola FL
PNSCFLFP	\$3,017,091.18	2,161,867.24	855,223.94	Zone2	Pensacola FL
PNSCFLHC	\$451,230.36	379,766.83	71,463.53	Zone2	Pensacola FL
PNSCFLPB	\$384,139.76	353,867.16	30,272.59	Zone2	Pensacola FL
PNSCFLWA	\$1,703,438.36	1,400,869.18	302,569.18	Zone2	Pensacola FL
Total	\$9,057,831.71	\$6,734,271.82	\$2,323,559.89		
CNTMFLLE	(\$111,976.25)	(125,624.80)	13,648.55	Zone3	Pensacola FL
HLNVFLMA	\$34,470.60	12,080.62	22,389.99	Zone3	Pensacola FL
JAY-FLMA	\$29,333.78	9,234.53	20,099.26	Zone3	Pensacola FL
MLTNFLRA	\$110,168.18	70,542.59	39,625.58	Zone3	Pensacola FL
MNSNFLMA	(\$107,585.60)	(103,253.03)	(4,332.57)	Zone3	Pensacola FL
PACEFLPV	\$228,202.80	188,220.21	39,982.59	Zone3	Pensacola FL
Total	\$182,613.51	\$51,200.11	\$131,413.39		
GCVLFLMA	(\$217,709.47)	(189,804.90)	(27,904.57)	Zone3	Tallahassee FL-GA
HAVNFLMA	(\$248,830.77)	(224,049.40)	(24,781.37)	Zone3	Tallahassee FL-GA
Total	(\$466,540.24)	(\$413,854.30)	(\$52,685.94)		
WWSPFLSH	\$704,016.22	509,407.58	194,608.64	Zone2	Tampa-St. Petersburg-Clearwater FL
BKVLFLJF	(\$300,115.89)	(329,098.38)	28,982.49	Zone3	Tampa-St. Petersburg-Clearwater FL
WWSPFLHI	(\$430,411.39)	(486,368.28)	55,956.88	Zone3	Tampa-St. Petersburg-Clearwater FL
Total	(\$730,527.28)	(\$815,466.66)	\$84,939.37		
BCRTFLBT	\$3,326,037.80	2,303,067.29	1,022,970.52	Zone1	West Palm Beach-Boca Raton FL
BCRTFLMA	\$7,850,702.00	5,694,406.94	2,156,295.06	Zone1	West Palm Beach-Boca Raton FL
WPBHFLAN	\$5,262,872.45	2,370,812.35	2,892,060.10	Zone1	West Palm Beach-Boca Raton FL
Total	\$16,439,612.25	\$10,368,286.57	\$6,071,325.67		
BCRTFLSA	\$4,739,560.12	4,316,630.63	422,929.49	Zone2	West Palm Beach-Boca Raton FL
BLGLFLMA	\$721,926.98	547,167.69	174,759.29	Zone2	West Palm Beach-Boca Raton FL
BYBHFLMA	\$5,308,263.59	4,599,773.28	708,490.32	Zone2	West Palm Beach-Boca Raton FL
DLBHFLKP	\$2,577,369.46	2,168,880.22	408,489.24	Zone2	West Palm Beach-Boca Raton FL
DLBHFLMA	\$2,999,925.55	2,179,698.54	820,227.00	Zone2	West Palm Beach-Boca Raton FL
JPTRFLMA	\$4,295,884.32	3,710,098.50	585,785.82	Zone2	West Palm Beach-Boca Raton FL
PAHKFLMA	\$159,086.27	143,488.51	15,597.76	Zone2	West Palm Beach-Boca Raton FL
WPBHFLGA	\$7,549,243.58	6,489,729.38	1,059,514.19	Zone2	West Palm Beach-Boca Raton FL
WPBHFLGR	\$5,692,137.96	3,959,752.95	1,732,385.01	Zone2	West Palm Beach-Boca Raton FL
WPBHFLHH	\$5,848,324.59	3,670,081.08	2,178,243.51	Zone2	West Palm Beach-Boca Raton FL
WPBHFLLE	\$3,060,277.61	2,260,328.72	799,948.89	Zone2	West Palm Beach-Boca Raton FL
WPBHFLRB	\$3,587,559.39	2,582,678.62	1,004,880.77	Zone2	West Palm Beach-Boca Raton FL
Total	\$46,539,559.42	\$36,628,308.14	\$9,911,251.28		
WPBHFLRP	\$2,893,868.28	2,389,393.91	504,474.37	Zone3	West Palm Beach-Boca Raton FL

NPV for Mass Market

	(a)	(b)	(c)	(d)	(e)
WCs with Negative Net Present Value	49	167	176	196	196
	10% MS, Medium Penetration, 14.01% capcost, 6.5% churn, \$47.25 revenue, \$130 cust-acquisition	10% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust-acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust-acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust-acquisition, CLEC purchasing power, medium CLEC size	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust-acquisition, CLEC purchasing power, small CLEC size
Wire Center	cust-acquisition	cust-acquisition	cust-acquisition	CLEC size	CLEC size
ARCHFLMA	\$1,757,821	(\$553,774)	(\$424,696)	(\$311,885)	(\$302,657)
BCRTFLBT	(\$1,451,047)	\$191,265	\$37,948	(\$694,819)	(\$720,468)
BCRTFLMA	(\$4,244,027)	\$631,255	\$254,848	(\$1,594,553)	(\$1,662,883)
BCRTFLSA	\$2,605,403	(\$1,426,681)	(\$971,837)	(\$2,508,180)	(\$2,539,133)
BGPIFLMA	\$1,985,525	(\$636,355)	(\$454,778)	(\$454,778)	(\$436,954)
BKVLFLJF	\$7,254,493	(\$2,364,479)	(\$1,599,073)	(\$1,416,559)	(\$1,385,186)
BLDWFLMA	\$940,148	(\$300,876)	(\$243,971)	(\$210,710)	(\$206,281)
BLGLFLMA	\$408,778	(\$210,464)	(\$154,989)	(\$332,414)	(\$337,071)
BNNLFLMA	\$3,198,850	(\$1,036,207)	(\$710,456)	(\$686,566)	(\$672,453)
BRSNFLMA	\$1,733,592	(\$548,383)	(\$411,078)	(\$335,177)	(\$326,016)
BYBHLFLMA	\$2,551,492	(\$1,554,579)	(\$1,059,223)	(\$2,574,467)	(\$2,615,881)
CCBHFLAF	(\$751)	(\$1,037)	(\$700)	(\$8,914)	(\$8,663)
CCBHFLMA	\$1,749,584	(\$732,054)	(\$556,838)	(\$772,287)	(\$775,269)
CDKYFLMA	\$922,853	(\$285,632)	(\$210,501)	(\$178,538)	(\$172,595)
CFLDFLMA	\$2,198,603	(\$702,704)	(\$494,344)	(\$414,998)	(\$404,168)
CHPLFLJA	\$2,873,391	(\$908,336)	(\$626,973)	(\$461,719)	(\$450,230)
CNTMFLLE	\$3,184,319	(\$1,034,227)	(\$709,846)	(\$613,253)	(\$603,120)
COCOFLMA	\$8,419,045	(\$2,923,266)	(\$2,337,859)	(\$1,623,159)	(\$1,668,407)
COCOFLME	\$4,576,743	(\$1,575,105)	(\$1,235,174)	(\$858,261)	(\$881,378)
CSCYFLBA	\$1,539,480	(\$492,761)	(\$371,714)	(\$323,335)	(\$315,497)
DBRYFLDL	\$1,031,994	(\$454,815)	(\$369,951)	(\$538,465)	(\$544,240)
DBRYFLMA	\$645,053	(\$273,299)	(\$235,893)	(\$319,664)	(\$322,178)
DELDFLMA	\$2,883,332	(\$1,131,099)	(\$855,917)	(\$955,271)	(\$964,767)
DLBHFLKP	\$3,542,056	(\$1,538,335)	(\$1,009,576)	(\$1,673,910)	(\$1,685,766)
DLBHFLMA	\$1,585,936	(\$857,152)	(\$591,194)	(\$1,297,897)	(\$1,314,436)
DLSPLFLMA	\$1,253,882	(\$394,093)	(\$320,195)	(\$229,884)	(\$223,503)
DNLNFLWM	\$5,863,245	(\$1,882,193)	(\$1,297,994)	(\$1,091,577)	(\$1,063,573)
DRBHFLMA	\$1,248,967	(\$909,579)	(\$617,755)	(\$1,775,296)	(\$1,804,390)
DYBHFLFN	\$364,191	(\$129,672)	(\$74,486)	(\$73,196)	(\$73,681)
DYBHFLMA	\$3,504,901	(\$1,402,737)	(\$1,041,099)	(\$1,228,161)	(\$1,238,882)
DYBHFLGB	\$3,125,907	(\$1,259,960)	(\$959,170)	(\$1,131,401)	(\$1,144,810)
DYBHFLS	\$1,396,148	(\$491,323)	(\$391,135)	(\$319,575)	(\$319,359)
DYBHFLPO	\$7,937,239	(\$2,927,095)	(\$2,035,979)	(\$2,112,720)	(\$2,115,594)
EGLLFLBG	\$1,288,936	(\$840,671)	(\$660,664)	(\$1,500,799)	(\$1,526,170)
EGLLFLIH	\$1,129,886	(\$537,316)	(\$471,311)	(\$726,733)	(\$733,349)
EORNFLMA	\$2,118,052	(\$693,560)	(\$479,943)	(\$474,627)	(\$466,349)
FLBHFLMA	\$1,142,479	(\$390,802)	(\$299,778)	(\$284,559)	(\$280,140)
FRBHFLFP	\$1,293,104	(\$587,754)	(\$491,759)	(\$757,352)	(\$763,381)
FTGRFLMA	\$318,725	(\$101,967)	(\$60,295)	(\$135,860)	(\$120,160)
FTLDFLCR	(\$2,548,208)	\$339,567	\$108,220	(\$989,654)	(\$1,029,112)
FTLDFLCY	(\$2,255,693)	\$371,310	\$130,524	(\$686,315)	(\$717,069)
FTLDFLJA	\$220,943	(\$663,761)	(\$463,191)	(\$2,246,095)	(\$2,287,299)
FTLDFLMR	(\$3,216,351)	\$385,059	\$149,727	(\$1,373,834)	(\$1,425,384)
FTLDFLOA	(\$3,574,458)	\$531,649	\$217,001	(\$1,267,175)	(\$1,322,424)
FTLDFLPL	(\$1,171,450)	(\$161,088)	(\$182,826)	(\$1,610,135)	(\$1,650,738)
FTLDFLSG	\$616,652	(\$239,946)	(\$142,548)	(\$188,860)	(\$189,151)
FTLDFLSU	(\$1,842,283)	\$139,599	(\$12,287)	(\$993,531)	(\$1,029,165)
FTLDFLWN	\$82,889	(\$346,963)	(\$294,412)	(\$1,294,611)	(\$1,317,872)
FTPRFLMA	\$12,157,442	(\$4,118,493)	(\$2,545,494)	(\$3,025,252)	(\$2,987,697)
GCSPLFLCN	\$2,277,026	(\$760,211)	(\$501,982)	(\$517,836)	(\$511,746)
GCVLFLMA	\$2,111,415	(\$658,400)	(\$482,385)	(\$339,247)	(\$329,206)
GENVFLMA	\$1,292,728	(\$411,426)	(\$333,684)	(\$280,323)	(\$273,584)
GLBRFLMC	\$1,055,097	(\$485,784)	(\$508,330)	(\$602,817)	(\$614,875)

NPV for Mass Market

	(a)	(b)	(c)	(d)	(e)
WCs with Negative Net Present Value	49	167	176	196	196
	10% MS, Medium Penetration, 14.01% capcost, 6.5% churn, \$47.25 revenue, \$130 cust acquisition	10% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.1 CLEC purchasing power, medium CLEC size	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.2 CLEC purchasing power, small CLEC size
Wire Center					
GSVFLMA	\$5,422,992	(\$2,375,440)	(\$1,967,050)	(\$2,483,711)	(\$2,525,454)
GSVFLNW	\$993,099	(\$430,487)	(\$350,464)	(\$516,448)	(\$524,735)
HAVNFLMA	\$2,786,625	(\$873,047)	(\$637,707)	(\$462,725)	(\$450,256)
HBSDFLMA	\$1,266,010	(\$488,448)	(\$350,918)	(\$487,531)	(\$487,898)
HLNVFLMA	\$4,112,494	(\$1,348,848)	(\$889,020)	(\$824,778)	(\$815,427)
HLWDFLHA	(\$1,160,333)	\$48,133	(\$65,418)	(\$693,530)	(\$719,041)
HLWDFLMA	(\$2,569,817)	\$311,340	\$105,374	(\$1,048,267)	(\$1,091,334)
HLWDFLPE	(\$353,413)	(\$1,093,558)	(\$808,170)	(\$4,294,199)	(\$4,380,572)
HLWDFLWH	\$30,494	(\$835,017)	(\$630,531)	(\$2,631,972)	(\$2,686,206)
HMSTFLEA	\$754,441	(\$234,804)	(\$142,410)	(\$157,182)	(\$152,642)
HMSTFLHM	\$5,771,872	(\$2,031,963)	(\$1,260,982)	(\$1,793,512)	(\$1,782,022)
HMSTFLNA	\$1,895,826	(\$640,436)	(\$430,355)	(\$522,370)	(\$516,930)
HTISFLMA	\$1,366,834	(\$594,785)	(\$524,438)	(\$829,737)	(\$826,077)
HWTHFLMA	\$1,752,443	(\$557,052)	(\$414,936)	(\$316,782)	(\$308,567)
ISLMFLMA	\$762,465	(\$267,904)	(\$209,568)	(\$256,011)	(\$252,623)
JAY-FLMA	\$51,135	(\$20,256)	(\$12,909)	(\$32,235)	(\$31,583)
JCBHFLAB	\$294,887	(\$213,445)	(\$246,921)	(\$518,849)	(\$528,025)
JCBHFLMA	\$291,541	(\$361,095)	(\$349,224)	(\$864,632)	(\$883,622)
JCBHFLSP	(\$159,095)	(\$79,010)	(\$156,145)	(\$377,685)	(\$388,573)
JCVLFLAR	\$622,443	(\$404,014)	(\$362,067)	(\$746,440)	(\$758,706)
JCVLFLBW	\$874,277	(\$614,956)	(\$523,423)	(\$1,296,488)	(\$1,316,917)
JCVLFLCL	(\$1,054,525)	\$83,058	(\$805,541)	(\$500,986)	(\$522,353)
JCVLFLFC	(\$438,300)	(\$57,780)	(\$181,131)	(\$532,554)	(\$547,978)
JCVLFLIA	\$48,309	(\$22,281)	(\$12,956)	(\$28,557)	(\$28,336)
JCVLFLJT	(\$61,573)	\$4,554	\$1,450	(\$16,465)	(\$17,907)
JCVLFLLF	\$6,516,071	(\$2,211,890)	(\$1,423,545)	(\$1,617,420)	(\$1,600,414)
JCVLFLNO	\$1,153,205	(\$605,683)	(\$473,501)	(\$913,003)	(\$924,943)
JCVLFLOW	\$3,975,839	(\$1,334,513)	(\$875,104)	(\$951,216)	(\$939,595)
JCVLFLRV	\$873,822	(\$503,705)	(\$415,232)	(\$783,044)	(\$795,953)
JCVLFLSJ	\$1,455,655	(\$736,458)	(\$563,552)	(\$1,055,159)	(\$1,067,201)
JCVLFLSM	(\$479,227)	\$11,059	(\$497,476)	(\$283,654)	(\$286,201)
JCVLFLWC	\$456,557	(\$501,555)	(\$469,757)	(\$1,266,106)	(\$1,291,695)
JPTRFLMA	\$35,922	(\$525,188)	(\$404,247)	(\$1,704,377)	(\$1,740,386)
KYHGFLMA	\$2,534,579	(\$818,926)	(\$578,882)	(\$485,873)	(\$476,387)
KYLRFLLS	\$931,431	(\$350,815)	(\$254,003)	(\$397,852)	(\$395,204)
KYLRFLMA	\$1,104,622	(\$412,553)	(\$300,167)	(\$468,624)	(\$465,301)
KYWSFLMA	(\$482,809)	(\$105,892)	(\$152,892)	(\$877,084)	(\$889,386)
LKCYFLMA	\$6,264,197	(\$2,104,889)	(\$1,350,621)	(\$1,530,631)	(\$1,511,290)
LKMRFLMA	\$329,008	(\$176,732)	(\$130,973)	(\$336,541)	(\$342,283)
LYHNFLHO	\$3,718,084	(\$1,193,347)	(\$842,685)	(\$653,154)	(\$641,236)
MCNPFLMA	\$1,052,588	(\$327,736)	(\$187,751)	(\$191,925)	(\$185,873)
MDBGFLPM	\$3,819,477	(\$1,285,380)	(\$864,172)	(\$943,523)	(\$933,844)
MIAMFLAE	(\$4,619,509)	\$846,819	\$413,852	(\$1,158,529)	(\$1,218,147)
MIAMFLAL	(\$637,893)	(\$77,319)	(\$130,646)	(\$806,616)	(\$827,259)
MIAMFLAP	\$206,327	(\$96,207)	(\$56,418)	(\$68,922)	(\$71,550)
MIAMFLBA	(\$2,096,105)	\$318,105	\$101,383	(\$756,532)	(\$788,303)
MIAMFLBC	(\$744,400)	\$107,629	(\$369,089)	(\$283,958)	(\$295,629)
MIAMFLBR	(\$2,923,268)	\$421,200	\$145,803	(\$1,037,261)	(\$1,081,229)
MIAMFLCA	(\$2,487,672)	(\$242,546)	(\$308,314)	(\$3,172,235)	(\$3,254,176)
MIAMFLDB	(\$52,997)	\$6,840	\$3,667	(\$9,934)	(\$10,875)
MIAMFLFL	(\$2,131,350)	\$327,353	\$109,352	(\$657,785)	(\$688,764)
MIAMFLGR	\$1,579,364	(\$707,153)	(\$417,152)	(\$369,909)	(\$393,505)
MIAMFLHL	(\$3,451,455)	(\$14,891)	(\$156,641)	(\$3,267,224)	(\$3,357,283)

NPV for Mass Market

	(a)	(b)	(c)	(d)	(e)
WCs with Negative Net Present Value	49	167	176	196	196
	10% MS, Medium Penetration, 14.01% capcost, 6.5% churn, \$47.25 revenue, \$130 cust acquisition	10% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.1 CLEC purchasing power, medium CLEC size	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.2 CLEC purchasing power, small CLEC size
Wire Center					
MIAMFLIC	(\$2,134,971)	\$235,544	\$30,253	(\$1,086,759)	(\$1,123,197)
MIAMFLKE	(\$260,624)	(\$23,773)	(\$64,885)	(\$319,367)	(\$328,569)
MIAMFLME	(\$699,389)	\$60,428	(\$40,149)	(\$356,291)	(\$368,910)
MIAMFLNM	(\$1,661,855)	\$234,055	\$56,626	(\$669,871)	(\$695,936)
MIAMFLNS	(\$430,574)	(\$150,701)	(\$168,163)	(\$885,883)	(\$906,239)
MIAMFLOL	(\$781,190)	(\$61,296)	(\$119,321)	(\$909,632)	(\$932,939)
MIAMFLPB	(\$3,220,994)	\$608,099	\$274,960	(\$695,993)	(\$734,631)
MIAMFLPL	\$1,996,668	(\$950,765)	(\$561,430)	(\$586,003)	(\$624,002)
MIAMFLRR	(\$842,557)	(\$204,433)	(\$196,872)	(\$1,517,823)	(\$1,553,758)
MIAMFLSH	(\$211,977)	(\$301,106)	(\$268,718)	(\$1,200,278)	(\$1,224,236)
MIAMFLSO	(\$823,990)	(\$297,353)	(\$244,247)	(\$1,867,945)	(\$1,910,960)
MIAMFLWD	(\$4,823,199)	\$819,753	\$345,723	(\$1,707,422)	(\$1,776,321)
MIAMFLWM	(\$3,390,764)	\$619,012	\$283,601	(\$819,935)	(\$863,257)
MICCFLLB	\$810,150	(\$306,112)	(\$272,617)	(\$269,005)	(\$268,366)
MLBRFLMA	\$6,461,676	(\$2,801,545)	(\$1,893,498)	(\$3,081,057)	(\$3,097,946)
MLTNFLRA	\$5,476,486	(\$1,819,134)	(\$1,308,191)	(\$1,144,769)	(\$1,133,386)
MNDRFLAV	\$362,858	(\$163,907)	(\$115,346)	(\$252,067)	(\$256,008)
MNDRFLLO	\$616,525	(\$518,180)	(\$454,268)	(\$1,175,996)	(\$1,196,167)
MNDRFLMW	\$2,179,658	(\$752,133)	(\$552,617)	(\$660,562)	(\$658,070)
MNSNFLMA	\$371,271	(\$117,680)	(\$71,605)	(\$132,694)	(\$127,133)
MRTHFLVE	\$1,214,626	(\$462,736)	(\$365,668)	(\$532,150)	(\$527,531)
MXVFLMA	\$768,364	(\$246,240)	(\$145,745)	(\$187,048)	(\$180,996)
NDADFLAC	(\$2,678,512)	\$372,417	\$120,923	(\$1,064,325)	(\$1,105,166)
NDADFLBR	(\$466,976)	(\$293,064)	(\$275,950)	(\$1,495,553)	(\$1,526,648)
NDADFLGG	(\$236,851)	(\$214,701)	(\$206,865)	(\$965,239)	(\$986,157)
NDADFLLOL	(\$2,570,893)	\$319,390	\$102,834	(\$1,185,800)	(\$1,229,822)
NKLRFLMA	\$574,677	(\$193,939)	(\$169,753)	(\$183,418)	(\$180,366)
NSBFLMA	\$5,092,595	(\$1,879,938)	(\$1,327,517)	(\$1,335,938)	(\$1,339,106)
NWBYFLMA	\$1,938,949	(\$622,709)	(\$460,944)	(\$370,660)	(\$362,316)
OKHLFLMA	\$1,266,286	(\$395,407)	(\$261,296)	(\$221,717)	(\$215,082)
OLTWFLLN	\$2,499,185	(\$786,357)	(\$563,060)	(\$446,109)	(\$432,870)
ORLDFLAP	\$1,138,391	(\$1,309,320)	(\$1,104,530)	(\$3,405,104)	(\$3,466,947)
ORLDFLCL	\$551,722	(\$409,559)	(\$346,426)	(\$800,680)	(\$814,634)
ORLDFLMA	(\$2,065,792)	\$259,900	(\$1,171,618)	(\$788,559)	(\$822,861)
ORLDFLPC	\$2,215,421	(\$1,341,514)	(\$982,197)	(\$2,511,574)	(\$2,542,583)
ORLDFLPH	\$859,315	(\$1,185,326)	(\$986,241)	(\$3,301,693)	(\$3,363,261)
ORLDFLSA	\$1,050,598	(\$560,073)	(\$1,238,803)	(\$960,139)	(\$970,281)
ORPKFLMA	\$174,980	(\$301,547)	(\$310,200)	(\$859,683)	(\$878,238)
ORPKFLRW	\$281,241	(\$227,937)	(\$251,195)	(\$499,526)	(\$508,505)
OVIDFLCA	\$81,901	(\$349,333)	(\$348,849)	(\$1,149,305)	(\$1,174,082)
PACEFLPV	\$3,122,470	(\$1,044,758)	(\$716,758)	(\$676,424)	(\$673,134)
PAHKFLMA	\$527,044	(\$188,863)	(\$165,862)	(\$192,456)	(\$190,891)
PCBHLNLT	\$5,146,494	(\$1,746,694)	(\$1,188,769)	(\$859,605)	(\$869,533)
PLCSFLMA	\$6,731,070	(\$2,204,093)	(\$1,493,900)	(\$1,361,430)	(\$1,341,775)
PLTKFLMA	\$4,864,972	(\$1,625,668)	(\$1,107,150)	(\$1,190,698)	(\$1,168,940)
PMBHFLCS	(\$693,898)	(\$546,115)	(\$468,624)	(\$2,910,195)	(\$2,969,718)
PMBHFLFE	(\$299,110)	(\$502,824)	(\$384,177)	(\$1,753,489)	(\$1,794,597)
PMBHFLMA	\$802,375	(\$919,601)	(\$648,907)	(\$2,104,671)	(\$2,145,261)
PMBHFLTA	(\$1,489,351)	\$61,487	(\$72,855)	(\$957,597)	(\$990,105)
PMPKFLMA	\$1,795,880	(\$561,968)	(\$413,322)	(\$321,235)	(\$310,866)
PNCYFLCA	\$3,606,126	(\$1,130,994)	(\$796,410)	(\$563,145)	(\$547,013)
PNCYFLMA	\$4,747,164	(\$1,696,293)	(\$1,183,318)	(\$992,636)	(\$1,017,904)
PNSCFLLB	\$2,209,326	(\$981,137)	(\$867,608)	(\$1,020,817)	(\$1,039,923)

NPV for Mass Market

	(a)	(b)	(c)	(d)	(e)
<i>WCs with Negative Net Present Value</i>	49	167	176	196	196
Wire Center	10% MS, Medium Penetration, 14.01% capcost, 6.5% churn, \$47.25 revenue, \$130 cust acquisition	10% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$130 cust acquisition	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.1 CLEC purchasing power, medium CLEC size	5% MS, Medium Penetration, 14.01% capcost, 8.33% churn, \$47.25 revenue, \$140 cust acquisition, 1.2 CLEC purchasing power, small CLEC size
PNSCFLFP	\$3,314,630	(\$1,442,462)	(\$1,218,200)	(\$1,520,894)	(\$1,547,014)
PNSCFLHC	\$1,568,853	(\$574,398)	(\$433,045)	(\$448,150)	(\$449,965)
PNSCFLPB	\$1,225,198	(\$455,685)	(\$359,882)	(\$374,741)	(\$377,239)
PNSCFLWA	\$2,996,764	(\$1,214,852)	(\$1,014,912)	(\$1,136,785)	(\$1,152,501)
PNVDFLMA	\$417,201	(\$314,320)	(\$316,935)	(\$709,736)	(\$721,945)
PRRNFLMA	(\$2,170,109)	(\$416,860)	(\$409,733)	(\$3,607,326)	(\$3,691,271)
PRSNFLFD	\$1,468,506	(\$463,001)	(\$291,041)	(\$259,274)	(\$251,993)
PTSLFLMA	\$8,518,595	(\$2,982,740)	(\$1,919,351)	(\$2,642,308)	(\$2,625,517)
PTSLFLSO	\$785,492	(\$395,505)	(\$355,583)	(\$660,304)	(\$664,440)
SBSTFLFE	\$982,674	(\$306,524)	(\$254,864)	(\$207,104)	(\$200,964)
SBSTFLMA	\$4,845,888	(\$1,604,752)	(\$1,131,411)	(\$1,202,059)	(\$1,177,271)
SGKYFLMA	\$1,760,533	(\$559,215)	(\$415,326)	(\$393,887)	(\$384,009)
SNFRFLMA	\$355,733	(\$648,065)	(\$557,790)	(\$1,844,358)	(\$1,882,019)
STAGFLBS	\$1,095,415	(\$463,516)	(\$361,500)	(\$461,185)	(\$466,782)
STAGFLMA	\$4,071,787	(\$1,437,904)	(\$949,343)	(\$1,137,831)	(\$1,132,639)
STAGFLSH	\$836,361	(\$357,924)	(\$288,404)	(\$388,093)	(\$392,689)
STAGFLWG	\$943,927	(\$296,347)	(\$156,833)	(\$160,683)	(\$155,921)
STRTFLMA	\$322,240	(\$722,584)	(\$550,519)	(\$1,993,584)	(\$2,032,233)
SYHSFLCC	\$1,609,405	(\$494,501)	(\$373,631)	(\$244,618)	(\$235,965)
TRENFLMA	\$1,851,142	(\$589,367)	(\$423,982)	(\$352,687)	(\$343,492)
TTVLFLMA	\$2,527,352	(\$1,094,250)	(\$773,821)	(\$1,192,018)	(\$1,200,059)
VERNFLMA	\$1,562,687	(\$482,621)	(\$339,728)	(\$256,856)	(\$248,333)
VRBHFLBE	\$992,531	(\$437,316)	(\$376,444)	(\$680,141)	(\$678,635)
VRBHFLMA	\$2,730,871	(\$1,316,601)	(\$923,489)	(\$1,809,873)	(\$1,822,418)
WELKFLMA	\$1,692,987	(\$526,887)	(\$405,115)	(\$300,668)	(\$290,257)
WPBHFLAN	(\$2,180,634)	\$373,724	(\$895,910)	(\$578,368)	(\$609,180)
WPBHFLGA	\$2,121,307	(\$1,646,971)	(\$1,132,213)	(\$3,367,297)	(\$3,427,034)
WPBHFLGR	\$951,353	(\$874,755)	(\$592,688)	(\$2,012,930)	(\$2,048,360)
WPBHFLHH	\$1,983,890	(\$1,202,698)	(\$786,152)	(\$2,064,580)	(\$2,094,962)
WPBHFLLE	\$2,001,964	(\$1,027,955)	(\$701,694)	(\$1,472,793)	(\$1,488,936)
WPBHFLRB	\$242,336	(\$468,156)	(\$358,504)	(\$1,251,059)	(\$1,275,811)
WPBHFLRP	\$10,322,006	(\$3,661,382)	(\$2,215,671)	(\$3,418,549)	(\$3,407,485)
WWSPFLHI	\$6,758,830	(\$2,160,942)	(\$1,492,541)	(\$1,187,531)	(\$1,153,784)
WWSPFLSH	\$7,540,126	(\$2,628,146)	(\$1,813,388)	(\$1,701,171)	(\$1,677,904)
YNFNFLMA	\$2,473,942	(\$771,553)	(\$576,379)	(\$399,236)	(\$387,166)
YNTWFLMA	\$1,307,845	(\$410,615)	(\$316,391)	(\$240,003)	(\$232,827)
YULEFLMA	\$1,332,777	(\$437,929)	(\$313,623)	(\$303,249)	(\$298,399)