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November 17, 1999

BY HAND DELIVERY

Ms. Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

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Re: Docket Nos. 990455-TL, 990456-TL, 990457-TL & 990517-TL

Dear Ms. Bayo:

On behalf of Sprint, enclosed for filing is the original and fifteen (15) copies of the Direct Testimony of Scott Ludwikowski in the above referenced dockets.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning the same to this writer.

Thank you for your assistance in this matter.

Sincerely,

Charles J. Rehwinkel /os

Charles J. Rehwinkel

cc: Parties of Record

Enclosures

- AFA _____
- APP _____
- CAF _____
- CMU _____
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- EAQ _____
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FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY

OF

SCOTT LUDWIKOWSKI, SPRINT PCS

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Q. State your name, job title, and the company with whom you are employed.

A. My name is Scott Ludwikowski. I am a Senior Network Engineer employed by Sprint PCS at its national headquarters in Kansas City. My resume is appended as Exhibit A.

Q. Describe Sprint PCS?

A. Sprint PCS provides commercial mobile radio service ("CMRS"). Beginning in 1995, Sprint PCS acquired new Personal Communications Services ("PCS") radio licenses (for which it paid the Federal Treasury approximately \$3 billion) to provide CMRS in all 50 states, Puerto Rico and the U.S. Virgin Islands. Although it commenced service only three years ago, Sprint PCS already serves nearly five million customers and its state-of-the-art, CDMA, all-digital network covers the majority of the

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1 nation's metropolitan areas including more than 4,000
2 cities and communities across the country. During each
3 of the past four quarters, Sprint PCS has acquired more
4 new customers than any other wireless carrier in the
5 country -- including much larger incumbent cellular
6 carriers.

7

8 Q. Briefly describe your job functions at Sprint PCS.

9

10 A. I am responsible for monitoring the usage of numbering
11 resources by Sprint PCS and its customers, for the
12 processes Sprint PCS uses in assigning telephone numbers
13 to its customers, and for planning for and obtaining
14 additional numbering resources. I also represent Sprint
15 PCS in the Industry Numbering Committee ("INC") and in
16 the Cellular Telecommunications Industry Association
17 ("CTIA") Number Advisory Group, which I currently co-
18 chair. These organizations address national numbering
19 policy issues and develop industry number guidelines,
20 with INC developing, among other things, the industry's
21 consensus pooling administrative guidelines. In
22 addition, I represent Sprint PCS in state NPA relief
23 planning, implementation, and conservation task forces
24 and work groups.

25

1 Q. Will Sprint PCS be impacted by the decision the
2 Commission makes in this proceeding?

3 A. Yes. Sprint PCS' federal licenses authorize it to
4 provide CMRS throughout the State of Florida. Sprint
5 PCS currently provides CMRS in all of the area codes -
6 or Number Planning Areas ("NPAs") - that are the subject
7 of this proceeding and as a result, uses numbering
8 resources in these NPAs. Sprint PCS will therefore be
9 directly impacted by the Commission's decisions adopting
10 the area code relief and new number conservation
11 measures.

12
13 Issue 1a: Should the Commission approve the
14 industry's consensus relief plans for the 305/786,
15 561, 954, and 904 area codes?

16
17 Q. Does Sprint PCS support the industry's consensus relief
18 plans for the 305/786, 561, 954, and 904 area codes?

19
20 A. Yes. Sprint PCS therefore recommends that the
21 Commission promptly approve the industry's plans.

22
23 Issue 1b: If the Commission does not approve the
24 industry's consensus relief plan, what alternative

1 plans should be approved for the 305/786, 561, 954,
2 and 904 area codes?

3

4 Q. What relief plans should the Commission adopt if it does
5 not implement the industry's consensus plans?

6 A. Because it favors approval of the industry plans, Sprint
7 PCS will defer addressing this "what if" question. If
8 necessary, Sprint PCS will address this issue in
9 rebuttal and at that time will have the benefit of the
10 views of any persons supporting adoption of an
11 alternative plan.

12

13 Issue 2a: What number conservation measure(s), if
14 any, should be implemented in the 305/786, 561, 954,
15 and 904 area codes?

16

17 Q. What conservation measures should the Commission
18 implement in the five area codes that are the subject of
19 this proceeding?

20

21 A. Sprint PCS recommends that the Commission consider
22 adopting a package of five conservation measures, and it
23 below discusses each of the five components of its
24 proposed conservation plan. However, these measures are
25 so important that Sprint PCS further recommends that,

1 with the exception of pooling which requires a staggered
2 implementation, the measures be adopted where lawful and
3 applied throughout the State of Florida, not simply in
4 those area codes that are the subject of this
5 proceeding. The adoption of conservation measures now
6 in area codes not currently in jeopardy has the
7 potential to extend the date that these non-jeopardy
8 NPAs become jeopardy NPAs.

9 A. Mandatory 1,000s-Block Management Guidelines.

10
11 Q. What are 1,000s-block management guidelines?

12
13 A. Thousands-block management guidelines involve an
14 internal process that carriers can utilize in assigning
15 available numbers to their customers. These guidelines
16 do not address the separate question of how carriers
17 obtain additional numbering resources - whether NXX
18 codes from the North American Numbering Plan
19 Administrator ("NANPA") or 1,000s blocks from the
20 pooling administrator.

21
22 Historically, carriers had the flexibility to assign to
23 customers numbers within their NXX codes without
24 constraint (e.g., NXX-1000, NXX-9050, NXX-3031). This
25 past practice did not pose any problems so long as

1 numbers were only assigned in blocks of 10,000, but this
2 practice must change if numbers are instead assigned in
3 blocks of 1,000.

4
5 There is much interest in number pooling as discussed in
6 subsection B below. However, pooling can be effective
7 only if there are 1,000s blocks - whether uncontaminated
8 blocks or blocks with less than 10% contamination - that
9 can be contributed to the pool. The more 1,000s blocks
10 in the pool, the more effective pooling will be in
11 delaying area code exhaust.

12
13 With 1,000s-block management guidelines, carriers manage
14 their numbers (assign numbers to customers) in blocks of
15 1,000 rather than in blocks of 10,000. When a carrier
16 begins to manage its numbers in blocks of 1,000, it
17 separates contaminated blocks (those with numbers
18 assigned) from uncontaminated blocks. The carrier sets
19 aside the "clean" or uncontaminated blocks and assigns
20 numbers to customers only from contaminated blocks.
21 (Importantly, the carrier need not assign numbers
22 sequentially within each block.) The carrier cannot
23 access one of the "clean" blocks until its inventory of
24 unassigned numbers in its contaminated blocks falls
25 below projected demand for numbers over a specified

1 period of time. (Industry guidelines specify a nine-
2 month period.)

3
4 An example may help explain how this process works.
5 Assume a carrier has been assigned one NXX code in a
6 rate center (e.g., 999) and that it has already assigned
7 numbers from three of the 10 thousands blocks (e.g.,
8 999-2000-2999; 999-4000-4999; and 999-7000-7999). In
9 industry parlance, these three 1,000s blocks are
10 contaminated, and the other seven thousands blocks are
11 uncontaminated. With 1,000s-block management rules in
12 force, a carrier may initially assign numbers to
13 customers only within the three contaminated blocks.

14
15 To continue this example, assume this carrier is growing
16 at an average rate of 100 customers per week and that on
17 December 1, it had assigned to customers 1,400 of the
18 3,000 available numbers. This carrier's reserve, or
19 inventory, of available numbers would be 1,600 - enough
20 to meet demand for 16 weeks (or four months). Industry
21 guidelines provide that a carrier may maintain an
22 inventory of available numbers necessary to meet demand
23 for the next nine months - for this carrier, a total of
24 3,600 numbers. Under these guidelines, this carrier
25 would be entitled to open two of the "clean" blocks it

1 earlier set aside and begin assigning numbers out of
2 these two newly opened blocks. The carrier could not
3 open another of its clean blocks until its inventory of
4 available numbers falls below that needed to maintain a
5 nine-month inventory.

6

7 Q. What are the benefits of adopting 1,000s-block
8 management rules at this time?

9

10 A. Thousands-block management guidelines will minimize the
11 number of 1000s blocks that are contaminated, so more
12 blocks can later be contributed to the pool once pooling
13 begins.

14 Q. What are the costs of adopting 1,000s-block management
15 rules at this time?

16

17 A. There are costs, and for some carriers, considerable
18 costs, in managing numbers in blocks of 1,000 rather
19 than in blocks of 10,000. A carrier may have to modify
20 a variety of service ordering and operational support
21 systems (or use a manual process which invites problems
22 like assigning the same number to two different
23 customers).

24

1 However, and this is important to emphasize, carriers
2 that participate in pooling must necessarily manage
3 their numbers in blocks of 1,000. There would appear to
4 be no significant additional cost to a carrier by
5 accelerating the date that carriers must begin managing
6 their numbers in blocks of 1,000 (e.g., beginning one
7 year before pooling rather than immediately before
8 pooling commences). However, by requiring carriers to
9 implement 1,000s-block management rules now rather than
10 later, the Commission can maximize the number of blocks
11 that will eventually be contributed to the pool, thereby
12 maximizing the benefits of pooling - and as a result,
13 delay area code relief as long as possible for NPAs not
14 already in jeopardy.

15 **Q. Did not the Commission approve 1,000s-block management**
16 **assignment guidelines in Order No. PCS-99-1393-S-TP**
17 **(July 20, 1999)?**

18
19 **A. Yes, but what the Commission approved in July was a**
20 **voluntary stipulation involving some (but not all)**
21 **Florida carriers - although the signatory carriers hold**
22 **most of the NXX codes in Florida. In approving this**
23 **stipulation, the Commission expressed "concern" that the**
24 **"lack of participation by some code holders would reduce**
25 **the effectiveness of the proposed stipulation." The**

1 Commission nonetheless approved the stipulation because
2 on balance, it "will provide sufficient interim
3 assistance in advance of state or federal action."
4

5 Q. Should the Commission now require all carriers that will
6 be participating in pooling to utilize the same 1,000-
7 block management guidelines?
8

9 A. Yes. Requiring all carriers that will be participating
10 in pooling to follow 1,000s-block management guidelines
11 will maximize the number of 1,000s blocks that can be
12 contributed to the pool, thereby making pooling even
13 more effective.
14

15 Q. Should carriers that will be unable to participate in
16 pooling in the foreseeable future - smaller incumbent
17 LECs and wireless carriers - be required to utilize the
18 same 1,000-block management guidelines?
19

20 A. Sprint PCS will only address wireless carriers, not
21 incumbent LECs. As a general rule, the Commission
22 should not impose new obligations on carriers unless the
23 benefits of the regulation clearly exceed the costs
24 resulting from the regulation. Legitimate arguments can
25 be made that the costs of requiring wireless carriers to

1 manage their numbers in blocks of 1,000 at this time far
2 exceed the benefits - because as discussed below, it
3 will be three years before wireless carriers will be
4 capable of participating in pooling, and thus three
5 years before they will begin donating 1,000s blocks to
6 the number pool.

7
8 However, Sprint PCS already follows the 1,000s-block
9 management guidelines that the Commission approved in
10 July. In fact, Sprint PCS was instrumental in
11 developing the industry consensus proposal that was
12 eventually submitted to the Commission. What is
13 critically important is that all wireless carriers -
14 small, large, or in the case of Sprint PCS, medium-sized
15 - be treated under the same set of rules (so regulation
16 does not distort competitive market forces). Sprint PCS
17 therefore asks the Commission to rule that all wireless
18 carriers should be either (a) required to follow the
19 same 1,000s-block management guidelines at this time or
20 (b) excused *temporarily* from following these guidelines.
21 If the Commission excuses wireless carriers from having
22 to implement 1,000s-block management rules, it would be
23 appropriate for the Commission to reconsider this matter
24 in 18 months or so, as the wireless LNP/pooling deadline
25 discussed below draws closer. One approach that the

1 Commission could adopt would be to require all wireless
2 carriers to begin utilizing 1,000s-block internal
3 management rules on the same date as pooling begins for
4 LNP-capable carriers.

5
6 Q. Are 1,000s-block management guidelines similar to
7 sequential numbering?

8
9 A. Yes. Both procedures have the same objective: prevent
10 carriers from needlessly contaminating 1,000s blocks
11 that could otherwise be contributed to the pool. With
12 sequential numbering, carriers would be required to
13 assign numbers one after the other (e.g., NXX-1001, NXX-
14 1002, NXX-1003). With 1,000s-block management rules,
15 carriers have flexibility to assign numbers within a
16 1,000s block (e.g., NXX-1098, NXX-1055, NXX-1077).

17
18 Q. Why not adopt a sequential numbering requirement rather
19 than 1,000s-block management procedures?

20
21 A. It would be very difficult, if not impossible as a
22 practical matter, for carriers to use sequential
23 numbering. There are many reasons for this, but I will
24 give only one example at this time: wireless pre-paid
25 service where customers pay for a certain number of

1 minutes before they use them. (Pre-paid services are
2 especially attractive to persons with a poor credit
3 rating or persons concerned that they will not use their
4 mobile phone too often.)

5
6 Wireless carriers must have some means to distinguish
7 pre-paid customers from ordinary, post-billed customers.
8 Some wireless carriers obtain a separate NXX code for
9 their pre-paid service (known as a special use code,
10 discussed below). Sprint PCS believes this practice
11 makes an inefficient use of NXX codes, and it
12 accordingly reserves 1,800 numbers within one of its
13 ordinary NXX codes for its prepaid service. Sprint PCS
14 could not offer pre-paid services in Florida if it were
15 required to eliminate the pre-paid subscribers' line
16 range and instead assign numbers consecutively. Even
17 assuming that Sprint PCS and its pre-paid service vendor
18 could make the necessary technical changes to their
19 respective systems - while making these changes work
20 with the treatment of pre-paid services in the dozens of
21 other states where Sprint PCS provides service - it
22 would be costly and time consuming to make these
23 changes. In all likelihood, this modification cost may
24 render the continued offering of pre-paid service itself
25 uneconomical and unprofitable.

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It is critically important for the Commission to note that 1,000s-block management rules have the same benefit as sequential numbering: maximize the number of 1,000s blocks that can be contributed to the pool. The difference is that 1,000s-block management guidelines recognize the need of carriers to meet bona fide customer requests for particular numbers. For this reason, the Commission should adopt 1,000s block management rules rather than sequential numbering rules.

Q. What 1,000s-block management rules should the Commission adopt?

A. Sprint PCS recommends that the Commission adopt the guidelines that the Florida industry agreed to follow in the stipulation that the Commission approved in Order No. PCS-99-1393-S-TP (July 20, 1999). These guidelines are similar to those industry uses in other states.

Q. How can the Commission ensure that carriers are complying with 1,000s-block management rules?

A. In the stipulation discussed above, the signatory carriers agreed to submit utilization data "upon written

1 request of the Commission, not to exceed twice per
2 year." Sprint PCS recommends that the Commission adopt
3 the same reporting requirement in any new rules that it
4 may adopt.

5 B. Number Pooling

6

7 Q. What is number pooling?

8

9 A. Historically, carriers have received an entire NXX block
10 - containing 10,000 numbers - when they needed
11 additional numbers in an area. The problem with this
12 approach is that carriers receive 10,000 numbers even
13 though they may only need several hundred numbers to
14 meet market demand in the foreseeable future. With
15 1,000s-block number pooling, numbers are assigned to
16 carriers in blocks of 1,000 rather than in blocks of
17 10,000 - thereby enabling the other 9,000 numbers
18 associated with a particular NXX code to be assigned to
19 other carriers. Potentially, up to 10 switches (and
20 even, 10 different carriers) can share the same NXX code
21 (as opposed to the past practice of each switch
22 requiring a separate NXX code).

23

24 Q. Can all carriers participate in number pooling?

25

1 A. No. To participate in pooling, a carrier must have the
2 technical capability to support local number portability
3 ("LNP"). In the past, carriers knew which switch to
4 which they must route a call based on the NXX code in
5 the dialed digits, because the NXX code uniquely
6 identified one switch from another (and, thereby, one
7 carrier from another). Once pooling is implemented,
8 switches are no longer uniquely identified by the NXX
9 code in the dialed digits because several switches (and,
10 in fact, several carriers) may be sharing the same NXX
11 code. As a practical matter, for a carrier to
12 participate in pooling it must be equipped with LNP
13 capability.

14
15 Q. **What carriers have LNP capability and can therefore**
16 **participate in pooling and what carriers do not have LNP**
17 **capability and cannot participate in pooling?**

18
19 A. The FCC has required all landline local exchange
20 carriers ("LECs"), whether incumbent or new entrant, to
21 provide LNP in the 100 most populous Metropolitan
22 Statistical Areas ("MSAs") by December 31, 1998. In
23 addition, LECs must provide LNP in other areas within
24 six months of a request. See FCC Rule 52.23(b) and (c).

1 Thus all landline LECs in at least the 100 most populous
2 MSAs have the technology to support number pooling.

3
4 Conversely, carriers without LNP capability are
5 incapable of participating in pooling. These non-LNP-
6 capable carriers fall into two general categories: (a)
7 LECs serving areas outside the 100 most populous MSAs,
8 and (b) wireless carriers.

9
10 **Q. Will wireless carriers ever be required to implement LNP**
11 **and therefore participate in pooling?**

12
13 **A. Yes, by November 24, 2002. FCC Rule 52.31(a) provides**
14 **in pertinent part:**
15 By November 24, 2002, all cellular, broadband PCS,
16 and covered SMR providers must provide a long-term
17 database method for number portability, in the MSAs
18 identified in the appendix to this party in
19 compliance with the performance criteria set forth in
20 § 52.23(a)

21
22 **Q. Why did the FCC permit wireless carriers to implement**
23 **LNP at a date after the time landline carriers implement**
24 **LNP?**

25

1 A. There are several reasons. Perhaps the most important
2 is that implementation of LNP poses a special technical
3 challenge for wireless carriers because they must
4 separate the Mobile Directory Number ("MDN") from the
5 Mobile Identification Number ("MIN"). In a wireless LNP
6 environment, the MDN becomes portable (it moves with the
7 customer), while the MIN remains non portable (it stays
8 with the carrier).

9
10 In addition, to continue to support seamless, nationwide
11 roaming, all wireless carriers in the country -
12 regardless of their location and size - must "flash cut"
13 to LNP on the same date. Thus, wireless carriers cannot
14 phase-in LNP as landline carriers have done (one MSA at
15 a time). See generally *CMRS LNP Forbearance Order*, WT
16 Docket No. 98-229, FCC 99-19, at ¶¶ 27-33 (Feb. 9,
17 1999).

18
19 **Q. Does the exclusion of wireless carriers from pooling**
20 **requirements mean that wireless carriers are not**
21 **affected by pooling?**

22
23 A. No. Although wireless carriers cannot currently support
24 LNP for their own customers, they must nonetheless
25 modify their networks so calls made by their customers

1 to persons assigned pooled numbers can be successfully
2 routed. FCC Rule 52.31(b) provides:
3 By December 31, 1998, all cellular, broadband PCS,
4 and covered SMR providers must have the capability to
5 obtain routing information, either by querying the
6 appropriate database themselves or by making
7 arrangements with other carriers that are capable of
8 performing database queries, so that they can deliver
9 calls from their networks to any party that has
10 retained its number after switching from one
11 telecommunications carrier to another.

12
13 What this means as a practical matter is that wireless
14 carriers must prepare for pooling (e.g., ensure they
15 have adequate database capacity, download pooled number
16 information to their LNP/pooling databases) in much the
17 same manner as landline LECs.

18
19 Moreover, long distance carriers, although under no
20 obligation to provide LNP, must also modify their
21 networks before pooling commences so their customers'
22 calls can continue to be completed successfully.
23 Consequently, implementation of pooling by LNP-capable
24 carriers affects the entire industry.

25

1 Q. Does the exclusion of wireless carriers from pooling
2 requirements mean that wireless carriers will use
3 numbers less efficiently than landline carriers?

4
5 A. Not really. As a whole, wireless carriers use numbers
6 more efficiently than landline carriers. This was
7 confirmed by a recent national study that Lockheed-
8 Martin prepared:

9 Estimated NXX Code

10 <u>Industry Segment</u>	<u>Nationwide Fill Rate</u>
11	
12 Wireless	42.8%
13	
14 Incumbent LEC	35.6%
15	
16 Competitive LEC	5.7%

17
18 See Lockheed Martin - CIS/NANPA, *Number Utilization*
19 *Forecast and Trends*, at 12 (Feb. 4, 1999).

20
21 The biggest reason for this difference in fill rates
22 among different industry segments is that unlike
23 landline LECs, wireless carriers do not require a
24 separate NXX code for each landline rate center.
25 Nationwide, wireless carriers have obtained NXX codes in

1 only 14% of all incumbent LEC rate centers. See NANPA,
2 *North American Numbering Plan Exhaust Study*, at 3-4,
3 Table 3-1 (April 22, 1999). While it makes sense to
4 assign numbers in blocks of 1,000 to landline carriers
5 that require numbers for each rate center, it makes much
6 less sense to assign numbers in blocks of 1,000 to
7 wireless carriers, when the numbers, though assigned to
8 only one rate center, are used to provide service in
9 five, ten, or even more landline rate centers.

10

11 Pooling makes even less sense for rapidly growing
12 carriers like Sprint PCS that use numbers efficiently,
13 especially in urban areas. (Sprint PCS acquired over
14 two million new net customers during the first nine
15 months of this year, and expects to acquire another
16 million new customers before the end of the year.)
17 Sprint PCS has numerous markets where it is growing at a
18 rate of over 1,000 customers per week. Even in markets
19 where Sprint PCS is only gaining 500 new customers
20 weekly, it makes little practical sense to require
21 Sprint PCS to submit applications for an additional
22 1,000s block every two weeks.

23

24 **Q. What are the issues the Commission must address with**
25 **regard to number pooling?**

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A. There are several important issues that the Commission must address. However, because these issues all relate to implementation, Sprint PCS discusses these issues in response to Issue 2b below.

C. Fill Rates and Number Assignment Criteria

Q. The FCC has delegated to the Commission the authority to establish NXX code allocation standards, including fill rates. Should the Commission establish minimal fill rates that carriers must meet as a condition to receiving additional numbering resources?

A. Sprint PCS does not oppose establishment of fill rates - so long as the Commission establishes a "safety valve" procedure for carriers growing rapidly. However, there are problems with a fill rate procedure, and Sprint PCS believes that the Commission can adopt more rigorous and effective procedures.

Q. What are the problems with a fill rate procedure?

A. There are at least four problems. First, the FCC has ruled that fill rates cannot be used for the assignment of initial codes. See *Florida Delegation Order* at ¶ 33.

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Second, use of a fill rate by itself may result in the assignment of numbers to a carrier that does not need them. Assume a carrier has two NXX codes and that the Commission adopts a fill rate requirement of 75%. This carrier would be eligible to apply for (and receive) a third code when 15,000 numbers are used - and 5,000 number remain unused. However, if this carrier is only growing at a rate of five percent per year (or 750 numbers per year), it would be eligible to receive a third code even though it would not need the code for over six years.

A third problem with a fill rate procedure is that it does not address the situation of rapidly growing carriers. Assume a carrier has one NXX code in a rate center and is growing at a rate of 1,000 customers (and numbers) a week. If a rigid 75% fill factor requirement were applied to this carrier, it would be unable to apply for an additional code until it had only 2,500 numbers remaining - a supply of two and one-half weeks. However, the process to apply for, obtain, and activate a new code takes about 10 weeks (actually, 66 days), resulting in this carrier being without numbers for over seven weeks. As the FCC has noted, it is important that

1 state regulators "allow for some flexibility in
2 establishing fill rates and applying them to carriers"
3 to accommodate the unique situations that invariably
4 arise. See *Florida Delegation Order* at ¶ 30.

5
6 A fourth problem with a fill rate procedure is that it
7 does not address the assignment of so-called "special
8 use" codes, a subject I discuss in more detail below.

9
10 Q. What, then, does Sprint PCS propose that the Commission
11 adopt with respect to the criteria a carrier must meet
12 to obtain additional numbering resources?

13
14 A. Sprint PCS recommends that the Commission adopt criteria
15 applicable to each of the three different kinds of NXX
16 codes: (1) initial codes, (2) growth codes, and (3)
17 special use codes. Sprint PCS submits its specific
18 proposals below.

19
20 Q. Before you describe Sprint PCS' specific assignment
21 criteria proposal, identify the carriers that would be
22 subject to these requirements.

23
24 A. The requirements Sprint PCS proposes would initially
25 apply to all carriers. Once pooling begins in a given

1 area, carriers participating in the pool (namely, LNP-
2 capable carriers) would no longer receive entire NXX
3 codes but would instead receive 1,000s blocks from the
4 pooling administrator. These 1,000s blocks would be
5 used to enter a new area (an initial 1,000s block), to
6 meet growing demand (a growth 1,000s block), or to
7 provide a unique service (a special use 1,000s block).
8 The industry pooling guidelines already address the
9 criteria under which pooling carriers may apply for and
10 receive a 1,000s block, and there is no need for
11 Commission rules in this area.

12
13 However, the requirements Sprint PCS proposes below
14 would still be used even after pooling begins for the
15 continued assignment of NXX codes. The requirements
16 would apply to (a) non-LNP-capable carriers, (b) the
17 pooling administrator, when it needs additional codes to
18 replenish the pool, and (c) LNP-capable carriers in
19 areas where pooling has not yet begun. Note that once
20 pooling begins, the pooling administrator applies to
21 NANPA for the assignment of an additional NXX code (to
22 replenish the pool) in the same fashion as a non-LNP-
23 capable carriers applies to NANPA for the assignment of
24 an NXX code. Thus, it remains imperative that the
25 Commission adopt and implement timely area code relief

1 after pooling begins because non-pooling carriers and
2 pooling carriers (through their agent, the pooling
3 administrator) will continue to require the assignment
4 of additional NXX codes.

5 1. Initial Code Requirements

6
7 Q. What proposal does Sprint recommend that the Commission
8 adopt with regard to initial codes - those codes that a
9 carrier obtains for a new rate center.

10
11 A. Sprint recommends that the Commission adopt the
12 following four-part test for the assignment of initial
13 codes:

14
15 (a) The applicant must supply documentation by rate
16 center of a bona fide request to provide service
17 within nine months (four months if the NPA is in
18 jeopardy);

19 (b) The applicant must certify that it is authorized
20 to provide service in the area requested, or has
21 an application pending for such authorization
22 and approval of the application is expected
23 within nine months (four months if an NPA is in
24 jeopardy);

1 (c) The applicant must represent that it will be
2 interconnected and have sufficient operable
3 facilities in the rate center requested within
4 nine months (four months if an NPA is in
5 jeopardy); and

6
7 (d) Within 60 days following the effective day of
8 the assignment of the initial code, the
9 applicant must certify that it has begun to use
10 the code in the assignment of numbers and in the
11 provision of service to customers.

12 Q. What if a carrier does not begin using its code within
13 the prescribed time period because of factors beyond its
14 control?

15
16 A. Sprint PCS believes that it is essential that the
17 Commission establish a waiver procedure to address this
18 situation. (Sprint PCS further recommends that the
19 Commission initially adopt a streamlined process for
20 Staff to administratively handle requests for extension
21 of time.) However, if a carrier fails to file a waiver
22 or if the waiver is denied, the initial code should be
23 reclaimed automatically.

24 2. Growth Code Requirements

- 1
- 2 Q. What proposal does Sprint recommend that the Commission
- 3 adopt with regard to growth codes - a code a carrier
- 4 needs because its existing supply of numbers is nearing
- 5 exhaustion.
- 6
- 7 A. Sprint recommends that the Commission adopt the
- 8 following five-part test for the assignment of growth
- 9 codes:
- 10 (a) The applicant must supply documentation (a
- 11 months-to-exhaust form) demonstrating by rate
- 12 center exhaust within nine months (four months
- 13 if the NPA is in jeopardy);
- 14 (b) The applicant must also supply six months of
- 15 historic utilization data and six months
- 16 forecast data to support the exhaust
- 17 projections;
- 18 (c) If the projected monthly demand is within 15% of
- 19 the average historical monthly utilization, a
- 20 code will be assigned. If the demand exceeds
- 21 15% of the utilization, the carrier must explain
- 22 the deviation prior to code assignment;
- 23 (d) Carriers must review all numbers in their
- 24 reserved status to ensure that it only retains

1 those numbers for which the carrier has a
2 legally enforceable written contract; and

3 (e) The carrier must have reduced its aging period
4 to 60 days (30 days if the NPA is in jeopardy),
5 unless a longer period is required by state
6 regulation or a contractual agreement.

7 **Q. Is not this proposal similar to a fill rate procedure?**

8
9 A. Yes, but Sprint PCS' demonstrated needs based proposal
10 is based on a more complete analysis and thus results in
11 a more accurate prediction of need. A fill rate
12 procedure only examines how many numbers a carrier has
13 already assigned. In contrast, Sprint PCS' proposal
14 examines a carrier's historical growth and its future
15 needs for additional numbers. Importantly, this future
16 projection is based on historical data; a new code is
17 automatically assigned only if projected demand is
18 within 15% of past assignment data. While a carrier may
19 seek an additional code if it claims that future demand
20 will exceed past assignment activity, the carrier has
21 the burden to justify this higher projected demand
22 before an additional code will be assigned. Thus,
23 Sprint PCS' proposal avoids the problem of allocating
24 additional numbers too soon to carriers growing slowly,

1 and further avoids the costs that would ensue if rapidly
2 growing carriers were required to prepare and the
3 Commission was required to review waivers of a fill
4 factor.

5 3. Special Use Code Requirements

6

7 Q. What is a special use code?

8

9 A. Industry number assignment guidelines define a special
10 use code as a code "necessary for distinct routing,
11 rating, or billing purpose." One example of a special
12 use code is the assignment of a separate NXX code for
13 use only with pre-paid service customers.

14

15 Q. What is the problem with special use codes?

16

17 A. While there may be legitimate reasons for a carrier to
18 seek assignment of a special use code, special use codes
19 can also be used as a subterfuge to bypass the
20 requirements placed on the assignment of initial and
21 growth codes. What one carrier may deem "necessary" may
22 not be deemed "necessary" within the industry, or the
23 Commission. For example, some wireless carriers
24 apparently believe that assignment of a special use code
25 for their pre-paid service is necessary. However,

1 Sprint PCS' practice concerning pre-paid services
2 (discussed above) demonstrates that the assignment of
3 separate codes is not necessary.

4

5 Q. What, then, does Sprint PCS propose the Commission do
6 with respect to special use codes?

7

8 A. Sprint PCS recommends that the Commission review
9 requests for special use codes with great care. At
10 minimum, it should require the applicant to demonstrate
11 that it cannot use its existing numbering resources for
12 the desired purpose. While the industry assignment
13 guidelines state that assignment of special use codes
14 "should be minimized" when an NPA is in jeopardy, the
15 Commission should consider prohibiting the assignment of
16 all special use codes during the time an area code is in
17 jeopardy. It is not apparent that a carrier should be
18 precluded from entering a market or meeting market
19 demand for its services because another carrier has
20 obtained a special use code to provide optional services
21 - services that can likely be supported by the carrier's
22 current inventory of numbering resources.

23 D. Reclamation

24

- 1 Q. What procedures should the Commission adopt concerning
2 the reclamation of NXX codes?
- 3 A. If the Commission adopts the number assignment
4 procedures above, reclamation should not be a major
5 issue in the future because Sprint PCS' proposed
6 assignment criteria will ensure that only those carriers
7 truly in need of numbers receive them. The focus of the
8 Commission's reclamation rules should be on the return
9 of codes already assigned, but still not placed in
10 service.
- 11
- 12 Sprint PCS recommends that the Commission require that
13 any codes assigned prior to the effective date of its
14 decision must be placed in service (i.e., have an active
15 customer) within four months of the Commission's
16 decision. If they are not placed in service by this
17 time, the codes should be returned to NANPA so they can
18 be made available to carriers truly needing codes.
- 19 E. Rate Center Consolidation
- 20
- 21 Q. What should the Commission do with regard to rate center
22 consolidation?
- 23
- 24 A. Where state law allows it, rate center consolidation is
25 an especially effective conservation measure,

1 particularly if undertaken prior to, or concurrently
2 with, implementing pooling. As the FCC has noted,
3 "[f]ewer, larger pools logically increase the
4 effectiveness of thousands-block pooling." *Florida*
5 *Delegation Order* at ¶ 20. Rate center consolidation can
6 result in significant efficiency gains, with or without
7 pooling, especially in areas that have a large number of
8 rate centers.

9
10 Rate center consolidation can be a challenging
11 undertaking, particularly for a state as large as
12 Florida. Sprint PCS therefore recommends that the
13 Commission focus its initial resources on those rate
14 centers that can be consolidated relatively easily and
15 quickly – that is, rate centers that can be consolidated
16 without impacting consumer rates (e.g., limit to
17 multiple rate centers that fall within the same local
18 calling area) or affecting revenues of providers. The
19 Commission may wish to investigate such consolidations
20 throughout the entire State of Florida, but Sprint PCS
21 recommends that it first focus on the jeopardy area
22 codes that are the subject of this proceeding. I have
23 no opinion on the legality of rate center consolidation
24 under Florida law.

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F. Lotteries and Their Future

Q. The FCC has delegated to the Commission certain authority over lotteries. What, if anything, should the Commission do with respect to lotteries?

A. Lotteries are part of the failed policies of the past, and they are no longer needed if the Commission adopts the rigorous conservation measures Sprint PCS has recommended above.

It is important to emphasize at the outset that lotteries are not a conservation measure. Code rationing and lotteries do not improve in any way the efficiency in which carriers utilize numbers. They rather restrict artificially the assignment of numbering resources when the underlying demand for services (and, therefore, numbers) is not restricted. Moreover, lotteries do not guarantee that scarce numbering resources are assigned to carriers most in need. Rather, assignment of additional numbers is instead based on the "luck of the draw" - and in the past, unscrupulous carriers could improve their luck simply by stuffing the lottery application box.

1 The conservation measures Sprint PCS recommends above -
2 and, in particular, the stringent assignment criteria
3 for initial, growth, and special use codes - would
4 ensure that only those carriers in need of numbers will
5 receive them and will receive additional numbers only
6 when they need them. In this environment, lotteries no
7 longer have a legitimate role to play.

8 Issue 2b: If conservation measures are to be
9 implemented, when should they be implemented?

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Q. When should conservation measures be implemented?

A. Rate center consolidation (if possible) and number pooling will take time to implement, and I discuss the unique issues with regard to pooling in detail below. However, Sprint PCS' other conservation proposals - mandatory 1,000s-block management rules, rigorous assignment criteria for initial, growth, and special use codes, and reclamation - could be implemented relatively quickly, within 30 to 60 days of a Commission order.

Q. What are the unique, or special, implementation issues associated with number pooling?

1 A. Number pooling is a complex undertaking. As discussed
2 below, the Commission must address six different issues
3 before pooling can commence in the State of Florida.
4 While the Commission should focus its efforts on
5 addressing these six issues, it must not lose sight of
6 the numerous other challenges pooling poses to industry.
7
8 The public switched telephone network has been designed
9 under the assumption that a specific NXX code uniquely
10 identifies one carrier. With pooling, this core design
11 feature is no longer accurate (because multiple carriers
12 will be sharing the same NXX code). Thus, while this
13 Commission has important pooling issues it must address,
14 carriers must begin working to modify virtually every
15 aspect of their network, including switch and database
16 software, service ordering processing, number management
17 practices, numerous operational support systems, and
18 billing systems. Sprint PCS does not mean to suggest
19 that these changes cannot (or should not) be made.
20 Sprint PCS only wishes to advise the Commission that the
21 work carriers must undertake is considerable and will
22 take time to complete. And, it is important to
23 emphasize that there are severe consequences if pooling
24 is implemented before this work is completed and
25 thoroughly tested: calls to consumers or businesses

1 assigned pooled numbers may be blocked or misrouted.
2 These facts suggest that when the Commission moves
3 forward with pooling, it do so only with due regard for
4 the need to maintain continued network reliability.

5 A. Selection of a Pooling Administrator

6

7 Q. What is the first step the Commission should take to
8 facilitate the introduction of pooling?

9

10 A. Without question, the most important first step the
11 Commission can take is to select the firm that will
12 administer the pooling program. Much of the work
13 industry needs to undertake to implement pooling cannot
14 even begin until a pooling administrator is selected.
15 Accordingly, the sooner the Commission selects a pooling
16 administrator, the sooner industry can begin its
17 important work to prepare for pooling.

18

19 Q. How should the Commission select a pooling
20 administrator?

21

22 A. Ideally, the Commission would adopt an open bidding
23 procedure, perhaps directing the Florida industry to
24 prepare a request for proposal. However, this approach
25 entails some delay, and there is growing recognition

1 that Lockheed Martin - CIS, which has administered the
2 Illinois pooling trial, has the necessary qualifications
3 and experience.
4

5 **Q. Are not there dangers in selecting a pooling**
6 **administrator before a pooling administration contract**
7 **is executed?**

8 **A. Yes. For this reason Sprint PCS recommends that the**
9 **Commission invite Lockheed Martin - CIS to submit a bid**
10 **proposal, after which carriers and other interested**
11 **parties would be given an opportunity to submit their**
12 **comments or concerns about the proposal.**

13 **B. Pooling Cost Recovery**

14

15 **Q. What other pooling issues must the Commission address?**
16

17 **A. While the FCC delegated the Commission certain authority**
18 **to implement pooling, it "further require[d] that the**
19 **Florida Commission determine the method to recover the**
20 **costs of the pooling trials." *Florida Delegation Order***
21 **at ¶ 17. There are two discrete cost recovery questions**
22 **that the Commission must address. The first question is**
23 **how the industry costs of pooling (e.g., the costs of**
24 **the pooling administrator) should be shared among**
25 **carriers in a competitively neutral manner.**

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Q. What is the second pooling cost recovery issue?

A. Carriers must also have an opportunity to recover their pooling costs, which fall into two categories: (a) their pro rata share of industry's common costs, and (b) their own carrier-specific costs that they incur in preparing for pooling (e.g., costs in modifying network capabilities and in expanding network capacity). The Commission need not concern itself with the recovery of carrier-specific costs incurred by competitive carriers. As the FCC has noted with respect to LNP costs, "[c]arriers not subject to rate regulation - such as competitive LECs, CMRS providers, and non-dominant IXCs - may recover their carrier-specific costs directly related to providing number portability in any lawful manner consistent with their obligations under the Communications Act." *Third Local Number Portability Order*, 13 FCC Rcd 11701, 11774 ¶ 136 (1998). The Commission should therefore limit its focus with regard to this second cost recovery issue to the recovery of pooling costs by incumbent LECs.

Q. How can the Commission most efficiently address this incumbent LEC cost recovery issue?

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A. Sprint PCS recommends that the cost recovery issue be handled in a separate proceeding.

C. Adoption of Pooling Administrative Guidelines

Q. What are pooling administrative guidelines?

A. Number pooling requires the cooperation of the entire industry (including non-pooling carriers), and industry's pooling administrative guidelines are designed to establish the rules under which pooling is implemented. Pooling will be successful only if all industry participants play by the same rules.

Q. What has the FCC said with respect to these guidelines?

A. The FCC has required the Commission to use the industry-adopted pooling guidelines, but gave the Commission the flexibility to modify those guidelines so long as it "consult[s] with the industry prior to implementing such changes." *Florida Delegation Order* at ¶ 13.

Q. What should the Commission do with respect to industry's pooling guidelines?

1 A. The industry's pooling guidelines were developed (and
2 are still being improved upon) using a deliberate,
3 interactive process reflecting industry's best judgment
4 based on its growing experience with pooling. Sprint
5 PCS therefore recommends that the Commission adopt the
6 industry's guidelines in full. If anyone believes that
7 the industry guidelines are deficient, that person
8 should submit its counterproposals to the Industry
9 Numbering Committee so they can be examined thoroughly.
10 If, however, the Commission believes that the industry
11 guidelines should be changed in any way, it should
12 identify these proposed changes (perhaps in staff
13 testimony) and provide industry an opportunity to submit
14 comment. The Commission must remember that any pooling
15 guidelines that it may adopt will be interim only. See
16 *Florida Delegation Order* at ¶ 21 ("Whatever decisions
17 this [FCC] reaches with regard to thousands-block
18 pooling administration and guidelines will supersede
19 whatever systems the Florida Commission puts in place
20 prior to the enactment of those [FCC] rules.").

21 D. Selection of First Area to Implement Pooling

22
23 Q. Is it not important for the Commission to determine
24 where pooling should be implemented?
25

1 A. Yes, but the FCC has imposed some limits on the
2 Commission's authority to make this decision. First,
3 the commission may implement pooling in only one
4 Metropolitan Statistical Area ("MSA") at a time.
5 *Florida Delegation Order* at ¶ 18. In this regard, the
6 FCC has recommended that the Commission implement
7 pooling in the area where pooling can achieve its
8 maximum benefits (e.g., areas where multiple LNP-capable
9 carriers exist). *Id.* at ¶ 20. In addition, the FCC
10 "direct[ed] the Florida Commission to ensure that an
11 adequate transition time is provided to carriers to
12 implement pooling in their switches and administrative
13 systems." *Id.* at ¶ 16.

14
15 Q. What MSA should the Commission select as the area where
16 to introduce pooling in the State of Florida?

17
18 A. There are several candidates. However, the issue is
19 sufficiently important that Sprint PCS recommends that
20 the Commission request public comment on this issue.
21 Ideally, the Commission will have selected a pooling
22 administrator by this time so it can also have the
23 benefits of its views based on its valuable experience
24 elsewhere.

1

2 Q. What about implementation of pooling in additional MSAs?

3

4 A. Having an overall game plan is important, but Sprint PCS
5 believes that the Commission should focus its early
6 effort on selecting the first MSA. Sprint PCS
7 recommends that the Commission refer the issue of
8 pooling in additional MSAs to industry which, in
9 conjunction with the pooling administrator, would submit
10 a report and, if possible, recommendations to the
11 Commission.

12

13 Q. Do the pooling activities in other states have any
14 relevance to Florida?

15

16 A. Yes, particularly in the next year or so. Most carriers
17 have regional (multi-state) or even national networks.
18 For example, Sprint PCS currently stores all ported and
19 pooled information across the country in LNP databases
20 located in Tennessee. Thus, the decisions by the
21 California and New York Commissions to implement pooling
22 could very well impact Sprint PCS' ability to support
23 pooling in Florida. Likewise, a pooling decision by
24 this Commission would very well affect Sprint PCS'

1 ability to support pooling in other states. Other
2 carriers face a similar challenge.

3
4 Fortunately, the impact state pooling decisions will
5 have on other states should be less of concern in a year
6 or so. As I discuss more fully below, industry is
7 developing an efficient pooling architecture and
8 administrative system, known as NPAC Release 3.0, that
9 will enable carriers to realize capacity savings up to
10 99.9%. NPAC Release 3.0 should be available for general
11 use beginning in January 2001. Once this new software
12 release becomes available, there should be much less
13 concern about one state negatively impacting service in
14 another state.

15 E. Pooling Start Date

16
17 Q. Is it not important for the Commission to establish a
18 start date for pooling once an area has been selected?

19
20 A. Yes. However, industry must perform numerous tasks
21 before pooling can begin. Under industry's pooling
22 guidelines, dates for these various preparatory tasks
23 are established at the first pooling implementation
24 meeting. Sprint PCS recommends that the Commission not
25 establish a firm start date until industry and the

1 pooling administrator have had an opportunity to conduct
2 this first implementation meeting and establish
3 tentative dates for the various preparatory tasks that
4 must be performed. If the Commission later finds that
5 the dates that industry has established are
6 unreasonable, it can then adjust the dates accordingly.

7

8 Q. Would it not be helpful for the Commission to at least
9 establish a preliminary target date?

10

11 A. Sprint PCS recommends that the Commission establish a
12 target date after January, 1, 2001.

13

14 Q. How did Sprint PCS arrive at this proposed start date?

15

16 A. Industry has developed technical specifications for the
17 efficient implementation of number pooling that will be
18 contained in Number Portability Administration Center
19 ("NPAC") Release 3.0 ("R3.0"). Lockheed Martin is
20 currently developing the software to implement R3.0 and
21 is under contract to make preliminary versions of R3.0
22 available to carriers by July 1, 2000. However,
23 industry will thereafter need time to test this new
24 program.

25

1 The North American Numbering Council ("NANC") Local
2 Number Portability Administration ("LNPA") Working
3 Group, consisting of industry and vendor
4 representatives, has established two phased approach to
5 testing R3.0. The first testing date, scheduled to
6 begin on April 17, 2000, is for the Service Order
7 Administration ("SOA") and Local Service Management
8 Systems ("LSMS") vendors to test their respective
9 platforms. This test will use simulators to emulate the
10 interface requirements of the Number Portability
11 Administration Center ("NPAC") using R3.0.

12
13 The second phase of R3.0 testing will follow completion
14 of the SOA and LSMS vendor tests, although it is hoped
15 that this second phase test can begin on July 3, 2000,
16 immediately after the R3.0 developer (Lockheed Martin)
17 makes R3.0 available for testing. It is estimated that
18 this second phase of testing will take four to six
19 months in a semi-live network. Any deficiencies or bugs
20 discovered during either test will have to be resolved
21 to pass final testing requirements.

22 The four-to-six months testing period estimate for this
23 second R3.0 test is based on industry's experience in
24 testing earlier versions of the NPAC administrative
25 system. The LNPA Working Group has specified certain

1 NPAC Functional Requirements for R3.0, with about 600
2 test cases that must be performed to verify the
3 specified NPAC functionalities. By comparison, about
4 200 test cases were required verify the interim R1.4
5 discussed below, and these more limited tests consumed
6 two months. R3.0 is much more complex (and robust) than
7 R1.4. It is the largest change in network design since
8 LNP. Adequate testing is critical to ensure proper call
9 processing and routing.

10

11 Q. Why not begin pooling sometime during 2000? After all,
12 industry is already pooling in Illinois.

13

14 A. It may be possible to commence pooling in Florida during
15 the second half of 2000 - assuming the Commission timely
16 addresses all six issues discussed in this testimony.
17 However, implementation of pooling before R3.0 becomes
18 generally available would increase substantially carrier
19 implementation costs (costs that will invariably be
20 passed on to consumers) and would increase substantially
21 the risk to continued network reliability. Sprint PCS,
22 for instance, would have to be sensitive to pooling
23 trials being conducted in other states to ensure that
24 adequate network capacity is available to support the

1 Florida trial. Many other carriers would face a similar
2 situation.
3
4 If the Commission ordered industry to commence pooling
5 during 2000, it would be required to utilize an interim
6 network architecture and administration, known as NPAC
7 release 1.4 ("R1.4"). R1.4 is the version that has been
8 used in the Illinois pooling trial, and unlike R3.0,
9 complies with only a small fraction of the national NPAC
10 pooling standards.
11 The principal difference between R1.4 and R3.0 is that
12 the latter will contain Efficient Data Representation
13 ("EDR"). With R1.4, each pooled number is stored as a
14 separate record in each carrier's number portability
15 databases (or SCPs). With EDR/R3.0, carriers may
16 instead store an entire thousands block as a single
17 record. Thus, use of EDR/R3.0 will result in a capacity
18 (and associated cost) savings to carriers of up to
19 99.9%.
20
21 Several words about capacity are in order. First, the
22 experience in Illinois suggests that carriers must be
23 prepared to store far more records with respect to
24 pooling than they currently store in connection with
25 ported numbers - up to 10 times the number of records.

1 Second, because carriers generally use centralized
2 (regional or national) network architectures to support
3 services in multiple states, each carrier's network
4 equipment must be capable of storing pooling records and
5 processing call attempts for pooling arrangements in
6 multiple states. Thus, while the number of 1,000 blocks
7 that will likely be involved in the first Florida
8 pooling trial may appear to this Commission to be
9 relatively small, from a carrier's perspective its
10 network must be capable of supporting all pooling (and
11 LNP) arrangements in an entire region or, in the case of
12 Sprint PCS, throughout the country.

13
14 Activating pooling before R3.0 becomes available
15 substantially increases the risk of network reliability
16 in two respects. First, every carrier (including non-
17 LNP-capable carriers) must have adequate capacity to
18 support pooling (and LNP) throughout a region or the
19 country as a whole - or calls to persons assigned pooled
20 numbers will be blocked or misrouted. Second, with R1.4
21 carriers must "upload" their donated blocks manually,
22 one record at a time. Not only is this a time consuming
23 process, but it invites conversion or translation
24 errors, errors that will result in calls being
25 misrouted. Once R3.0 becomes available, carriers can

1 upload a block of 1,000 numbers as a single block,
2 virtually eliminating the risk of errors. Carriers will
3 also experience increased costs if they must convert
4 pooling records from a R1.4 environment to a R3.0
5 environment - a set of transition costs they would not
6 incur if pooling did not begin until R3.0 became
7 available.

8
9 As one might expect, there is a strong interest in
10 number pooling throughout the nation. California and
11 Massachusetts, which face extreme circumstances in
12 several NPAs, have already ordered pooling for the Los
13 Angeles and Boston areas respectively (although they
14 have yet to set start dates). New York has also
15 commenced proceedings to implement pooling, and Maine
16 recently established a tentative start date of June
17 2000. The point is that the activation of pooling in
18 one state can (and almost certainly, will) impact a
19 carrier's ability to implement pooling (landline LNP) in
20 another state.

21
22 For the same reason that it is unwise to convert all
23 areas in a state to pooling at the same time, so too it
24 is important that state commissions coordinate their
25 respective start dates with each other - at least if

1 pooling is implemented before R3.0 becomes generally
2 available. A phased introduction to pooling will help
3 ensure that network reliability is not put at risk and
4 that consumers and businesses assigned numbers from the
5 pool will continue to receive all calls directed to
6 them. Because of all the problems and costs associated
7 with R1.4, Sprint PCS strongly recommends that pooling
8 in Florida not be activated until R3.0 has been tested
9 and becomes available.

10

11 Q. But is there not a numbering crisis in Florida that
12 demands early implementation of pooling - regardless of
13 added costs and even though early implementation could
14 jeopardize the ability of Florida residents and
15 businesses to receive calls?

16

17 A. There is a crisis in the 305 NPA. As of October 31,
18 1999, there are only 16 NXX codes remaining. However,
19 this NPA is in such extraordinary jeopardy that pooling
20 and other conservation measures will not obviate the
21 need for prompt implementation of area code relief.
22 (There is general industry consensus that pooling will
23 result in minimal benefits if fewer than 100 NXX codes
24 remain available.) Put another way, it is simply too

1 late for new conservation measures to save the 305 NPA
2 from relief. It is important for the Commission to
3 remember that it must make available timely numbering
4 resources for all carriers. Thus, even if LNP-capable
5 carriers participating in a 305 pool can meet their
6 needs from uncontaminated 1,000s blocks, there must
7 still be a sufficient supply of whole NXX codes for non-
8 LNP carriers that cannot technically participate in the
9 pool - and for the pooling administrator when it needs
10 to replenish the pool in one or more rate centers.

11

12 The situation in three of the other four area codes is
13 serious, but not a crisis. Based on information NANPA
14 recently furnished to Sprint PCS, the other four area
15 codes that are the subject of this proceeding had the
16 following number of NXX codes available as of October
17 31, 1999:

18	<u>NPA</u>	<u>Available Codes</u>
19	561	211
20	786	616
21	904	181
22	954	189
23		

1 Given that there are a reasonable number of available
2 codes in these other Florida NPAs, coupled with the fact
3 that at least the largest Florida carriers have already
4 implemented 1,000s-block management procedures (so as to
5 maximize the number of blocks that can be contributed to
6 the pool), Sprint PCS submits that the costs of
7 implementing pooling prior to the availability of R3.0
8 (both dollar costs and risks to network reliability) far
9 exceed the limited benefits that would be realized by
10 implementing pooling in late 2000 as opposed to early
11 2001.

12 F. Adoption of Backup Area Code Relief Plan

13
14 Q. **Are there any other steps that the Commission must take**
15 **before pooling can be introduced in the State of**
16 **Florida?**

17 A. Yes. The FCC has required that if pooling is
18 implemented in any jeopardy NPA, "the Florida Commission
19 must take all necessary steps to prepare an NPA relief
20 plan that may be adopted by the Florida Commission in
21 the event that numbering resources in the NPA at issue
22 are in imminent danger of being exhausted":

23 [W]e require only that the Florida Commission be
24 prepared to implement a "back-up" NPA relief plan
25 prior to the exhaustion of numbering resources in the

1 NPA at issue. Consumers should never be in the
2 position of being unable to exercise their choice of
3 carrier because that carrier does not have access to
4 numbering resources. This criterion attempts to
5 ensure that consumers continue to retain a choice of
6 telecommunications providers in the event that the
7 pooling trial or trials do not stave off the need for
8 area code relief. *Florida Delegation Order* at ¶ 14.

9

10 Issue 3: What should be the dialing pattern for
11 local, toll, EAS, and ECS calls for the 305/786, 561,
12 954, and 904 area codes?

13 Q. What dialing plan should the Commission adopt for the
14 four area codes that are the subject of this proceeding?

15

16 A. Sprint PCS will not comment on the dialing plans
17 customers of landline carriers should use. The
18 Commission has never addressed the dialing plans used by
19 wireless carriers, and there is no reason for it to
20 intervene in this issue now. The wireless market is
21 competitive, and this competition will ensure that
22 wireless carriers will provide dialing arrangements (so
23 long as they are consistent with their technology) that
24 consumers prefer.

1 Issue 4: What is the appropriate relief plan
2 implementation schedule for the 305/786, 561,
3 954, and 904 area codes?

4
5 **Q. When should relief plans for the 305/786, 561, 954, and**
6 **904 area codes be implemented?**

7
8 A. This Commission's authority to adopt area code relief is
9 authority that the FCC has delegated to it, and it is
10 therefore important that the Commission act within the
11 scope of its delegated authority. FCC Rule 52.9(a)(1)
12 specifies that state regulators "shall . . .
13 [facilitate entry into the telecommunications
14 marketplace by making telecommunications numbering
15 resources available on an efficient, timely basis to
16 telecommunications carriers" (emphasis added). In this
17 regard, the FCC has declared that "the Florida
18 Commission continues to bear the obligation of
19 implementing area code relief when necessary, and we
20 expect the Florida Commission to fulfill this obligation
21 in a timely manner":

22 Under no circumstances should consumers be precluded
23 from receiving telecommunications services of this
24 choice from providers of their choice for a want of

1 numbering resources. *Florida Delegation Order* at ¶
2 8.

3
4 *See also id.* at ¶ 14 ("Consumers should never be in the
5 position of being unable to exercise their choice of
6 carrier because that carrier does not have access to
7 numbering resources."). In addition, the FCC has
8 cautioned that the Florida Commission must "safeguard
9 [non-pooling] carriers' access to numbering resources,
10 while they lack the technical capability to participate
11 in pooling":

12 Within NPAs that are subject to the pooling trial,
13 non-LNP capable carriers shall have the same access
14 to numbering resources after pooling is implemented
15 that they had prior to implementation of a pooling
16 regime, *i.e.*, non-LNP capable carriers shall continue
17 to be able to obtain full NXX codes. *Florida*
18 *Delegation Order* at ¶ 15.

19
20 It is thus imperative that a new area code be activated
21 before the last NXX code in the existing area code is
22 assigned. If area code relief is not activated until
23 after NXX codes in the existing area code have
24 exhausted, there would be the very real risk that
25 carriers will be unable to obtain the numbers they need

1 and that as a result, consumers will be precluded from
2 using the carrier of their choice. The experience in
3 Illinois demonstrates that under the right plan, both
4 pooling carriers and non-pooling carriers can have
5 timely and equitable access to numbering resources while
6 ensuring that all carriers use scarce numbering
7 resources as efficiently as possible.

8

9 Q. Should a relief plan be adopted and a new area code be
10 activated before the last minute?

11

12 A. Yes. Carriers need time to implement any Commission
13 area code relief decision. More importantly, though,
14 consumers and businesses need time to adjust to the new
15 environment. The sooner the Commission announces its
16 relief plan, the more time that will be generally
17 available to educate consumers and businesses about the
18 new area code and for the public to adjust to the new
19 environment.

20

21 Q. In implementing relief, does it make a difference
22 whether the relief plan involves a geographic split or
23 an overlay?

24 A. Yes. Experience has demonstrated that the public often
25 needs more time to adjust to a geographic split compared

1 to an overlay. In addition, overlay plans can be
2 implemented sooner than geographic splits. There is
3 growing evidence, including in Florida, that the public
4 adjusts relatively quickly to the 10-digit dialing
5 required by an overlay. For example, last year Colorado
6 implemented an overlay in the Denver metropolitan area
7 (303/720 NPAs). The Colorado Commission was "very
8 concerned" with the impact that this new type of relief
9 plan would have on consumers, and it accordingly "manned
10 the phones at an increased level for a week when the ten
11 digit dialing became mandatory." Nevertheless, the
12 Colorado Commission has reported that "[a]dopting to ten
13 digit dialing . . . has gone more smoothly than anyone
14 could have predicted":

15 Weeks after implementation, the Commission had
16 received only three phone calls from customers
17 complaining or having problems. . . . This
18 [successful conversion] is in large part because of a
19 strong customer education campaign that included
20 radio, television and newspaper advertisements.
21 Comments of the Colorado Public Utilities Commission,
22 CC Docket No. 99-200, at 12 ¶ 21 (July 29, 1999).

23 The situation in Colorado is by no means unique. See,
24 e.g., Mark Hayward, *Folks Give the Big Shrug to Area
25 Code Changes*, *The Union Leader*, at C2 (Aug. 11,

1 1999) (Houston's switch to 10-digit dialing was a "non-
2 issue" and has been met with a shrug because people
3 understood the need for it. In Dallas, people now dial
4 10-digits out of habit); Maria M. Perotin, *Here's the*
5 *Buzz: Phone Changes Looming*, *The Orlando Sentinel*, at D1
6 (June 24, 1999) (recognizing that 10-digit dialing
7 eventually will be universal); Editorial, *The Atlanta*
8 *J.*, at 14A (July 17, 1999) (10-digit dialing is a small
9 price to pay for avoiding the greater costs to
10 businesses, the inconvenience of changing numbers and
11 the benefits brought by the boom in telecommunications);
12 Ken Schrad, *VCC Orders Overlay Area Code for Northern*
13 *Virginia*, News Release (Nov. 23, 1998) (10-digit overlay
14 will not substantially alter existing dialing patterns
15 within the 703 NPA since most Virginia customers making
16 calls into Washington D.C. and Maryland exchanges
17 already dial 10 digits); Patrick Flanagan, *Area Code*
18 *Relief Equals 10-digit Dialing*, *Telecommunications*, Vol.
19 33, No. 6, Pg. 16, 19 (June 1999) (Maryland overlay was a
20 nonissue, in part because residents in the Washington
21 D.C. area have long been used to making 10-digit calls
22 between the 202 area code and suburban Maryland).

23

24 In contrast, with a split, roughly half of the consumers
25 and businesses in an area code are required to accept a

1 number change, and they understandably need time to
2 advise friends, family, and customers of their new
3 number, to purchase new stationary, business cards, and
4 the like, change advertising (including Yellow Pages),
5 and possibly re-program computers for internet and e-
6 mail access. Obviously, if a split is the preferred
7 method of relief, it would be preferable to give the
8 public six or eight months notice as opposed to only
9 three or four months notice. Thus, the more quickly the
10 Commission adopts a relief plan (split or overlay), the
11 more time it will afford consumers and businesses to
12 prepare for the plan's implementation.

13
14 **Q. Are there other advantages of an overlay over a**
15 **geographic split with regard to the implementation of**
16 **area code relief?**

17
18 **A. Yes. Geographic splits require a rigid implementation**
19 **schedule. Specifically, the activation date of a split**
20 **must be published months in advance so the public knows**
21 **precisely when the new telephone numbers and dialing**
22 **arrangements will take effect. The weakness in this**
23 **approach is that the new area code can be activated too**
24 **soon (before it was necessary) or worse, too late - with**
25 **the result that the existing area code has exhausted**

1 completely with some carriers being deprived of
2 obtaining the numbers they need to support their
3 services.

4
5 There is must greater flexibility with regard to the
6 implementation of an overlay. In Illinois, for example,
7 the overlay relief plan is activated (i.e., 10-digit
8 dialing becomes mandatory) when the number administrator
9 (NANPA) assigns the last NXX code in the existing area
10 code. With this arrangement, there is no issue over
11 implementing relief too soon or too late.

12

13 Q. Does this conclude your testimony?

14

15 A. Yes.

16

17

18

CERTIFICATE OF SERVICE
DOCKET NOS. 990455-TL, 990456-TL, 990457-TL & 990517-TL

I HEREBY CERTIFY that a true and correct copy of the foregoing was served by U.S. Mail or hand-delivery this 17th day of November, 1999 to the following:

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