

1 up with 87,000,000, 27,000,000, what have you, dropped
2 below.

3 I understand Los Angeles and I understand
4 Chicago and New York. Once you get below that, would the
5 existing 50 mega-hertz cellular, and numerous channels of
6 EMSR, would that provide enough -- more than enough
7 spectrum for you to go for them, or are you supposed to be
8 above that?

9 MR. LOWENSTEIN: For those in the top 50
10 markets, more than enough spectrum. It's not a question
11 of spectrum. It's a question of pricing the systems.

12 MR. TWYVER: And it's a question of how to use
13 that spectrum. I mean, we had mentioned major new
14 services using the two ban spectrum. It would be a shame
15 to prevent those devices and those services from these
16 being deployed in -- in less dense areas, because it was
17 the wrong frequency.

18 MR. LOWENSTEIN: I certainly believe that the
19 800 mega-hertz channels available in the existing spectrum
20 is sufficient to serve those needs, as they're understood
21 today, with visual technology implemented as they're
22 understood by the prognosticators who base future on the

1 **PRESENT:**

2 Reed E. Hundt, Chairman

3 Andrew C. Barrett, Commissioner

4

5 **TASK FORCE MEMBERS:**

6

7 Dr. Robert Pepper, Chief
8 Office of Plans and Policy

9

10 Don Gips, Deputy Chief
11 Office of Plans and Policy

12

13 Tom Stanley, Chief Engineer
14 Office of Plans and Policy

15 Michael Katz, Chief Economist
16 Office of Plans and Policy

17

18 Jerry Vaughn, Deputy Chief
19 Common Carrier Bureau

20

21 Ralph Haller, Chief
22 Private Radio Bureau

23

24 Nancy Peretsmall

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1 Panel I - Dr. Robert Pepper
2 Tom Stroup
Personal Communications Industry Association
3
4 Dave Twyber, President
Wireless Systems Group
Northern Telecom
5
6 David Kerr
BIS Strategic Decisions
7
8 Mark Lowenstein, Director
Wireless Mobile Communications
Yankee Group
9
10 Dan Trampush
Ernst & Young
National Director of Telecom Consulting
11
12 Elliott Hamilton
Vice president and Director
U.S. Wireless Consulting
MTA/EMCI
13
14 Dr. C.J. Waylon, Executive Vice President
Marketing and Business Development
GTE Personal Communications Services
15
16 Stan Besch
17
18 Daniel Kelley
19
20 Jerry Hausman
21
22 Al Honston
John Oxendine
Herbert Wilkins
Paul Rissman

1 P-R-O-C-E-E-D-I-N-G-S

2 MR. HALLER: If we could get started, please.

3 If we could have our panelists come on up to the table for
4 the first panel.

5 Good morning, and welcome to everyone. We hope
6 that we have an exciting day in store for you with a
7 considerable amount of spirited debate before the day is
8 over.

9 By way of background, these panel discussions
10 are being held by the FCC's PCS Task Force. The Task
11 Force was created by Chairman Hundt in response to over 60
12 petitions for reconsideration to the Commission's PCS
13 decision last September.

14 The petitions reached nearly every single aspect
15 of that decision, including spectrum size, licensing
16 areas, treatment of designated entities, and
17 interrelationships to other services, such as mobile
18 satellite.

19 The Task Force members are Dr. Robert Pepper,
20 Chief of the OPP -- Office of Plans and Policy;
21 Don Gips, Deputy Chief, Office of Plans and Policy;
22 Tom Stanley, Chief Engineer; Michael Katz, Chief

1 Economist; Jerry Vaughn, Deputy Chief, Common Carrier
2 Bureau, and myself, Ralph Haller, Chief of the Private
3 Radio Bureau.

4 The function of the Task Force is to examine all
5 aspects of the PCS decision and the auction procedures to
6 assure consistency and to move the process forward.

7 Contrary to some press reports, we view the task
8 force as a way to assure a speedy decision-making process
9 and not a delaying factor, but we must carefully consider
10 the many, many issues and make sure that the next decision
11 by the Commission is a very reasoned and very
12 knowledgeable decision.

13 In that regard, we've invited a number of
14 experts in market forecasts, economics, the financial
15 community, spectrum and technical issues. We've attempted
16 to get representation on all sides of each issue, based on
17 information that's already been filed in the record.

18 Speaking of filing, we will accept additional
19 comments for the record through the close of business on
20 April 22nd. The comments may address specific issues that
21 were brought up on this Panel.

22 I would ask, if you have already filed a

1 position, that, since we know what that is, you need not
2 re-file it, but if you have additional information that
3 would help us make our decisions, then we urge you to file
4 by close of business on April 22nd.

5 The basic format of today's session is for each
6 panelist to have five minutes to present his or her
7 position. For the information of the panelists, there is
8 blue and red light in front of me. When the blue light
9 comes on -- could we have the blue light -- when that
10 comes on, that's the four-minute mark; then when the red
11 light comes on -- that's it -- and you'll also hear a bell
12 (ringing of bell).

13 [Laughter]

14 Would you hold that bell up so they can see the
15 size of it? We wanted to make sure everyone could hear
16 this.

17 VOICE: You finally found a use for your bell.

18 MR. HALLER: That's right.

19 We ask the panelists that, when you hear the
20 bell ring, please complete the sentence that you're in, so
21 that we can move onto the next panelist. We have a full
22 day and we're going to be not very humorous about

1 extensions of time.

2 After the presentations, we will then ask the
3 Panel various questions and hopefully get some debate
4 among them.

5 No questions are going to be permitted directly
6 from the audience. However, we encourage you, if you have
7 a question, please write that question down and pass it up
8 to us. We reserve the right to use it or not use it, but
9 you may well cause us to ask a question that will be very
10 helpful in these proceedings, so by all means feel free to
11 pass those questions forward.

12 These proceedings are being videotaped. Copies
13 of the videotape can be purchased from the duplicating
14 contractor, and the details of that are available at the
15 table outside the back door. We plan to enter a tape in
16 the official record of this document, and we also hope to
17 have a transcript available to you electronically in the
18 very near future.

19 I would also like to express my appreciation to
20 the three commissioners for their support of this Task
21 Force and the support of today's panel.

22 Unfortunately, Commissioner Quello could not be

1 with us today. He does have a statement, which Chairman
2 Hundt will read.

3 Without further delay, I would like to invite
4 the Commissioners to offer any comments that they may have
5 in these proceedings.

6 Chairman Hundt?

7 THE CHAIRMAN: Thank you very much, Ralph.

8 Thank you, to everyone in attendance today and
9 everyone who has participated but is not in attendance,
10 and in advance to those who will continue to participate
11 in our deliberations on PCS.

12 As all of you know, more or less, we will taking
13 up a PCS item on an average of once a month for probably
14 most of the months that remain in this year because there
15 are so many different kinds of PCS items. I won't detail
16 all of them for you they're already well known to you.

17 What I think is important is that we focus on
18 the general event that is occurring, and that is that
19 United States, through regulation but primarily through
20 the private sector, is attempting to enter or to put our
21 economy into a new venture, a new sector of our economy, a
22 new dimension of mobile telephony and other mobile

1 services.

2 This is very exciting. We are among the world's
3 leaders in this respect. That's a good thing for us and a
4 good thing for the world, and the businesses and other
5 entities that are represented here today should claim that
6 leadership, and should be telling us how we can so rule as
7 to permit them to proceed on.

8 It is, indeed, as Ralph mentioned, because of
9 the intensity of comment that we've received in the nature
10 of reconsideration and on other upcoming items, that we
11 thought it was best for us and best for the public at
12 large, if you all were willing to participate in this open
13 meeting, or round table. I am greatly looking forward to
14 the views that are expressed here today.

15 I suppose it's a little bit like a game show
16 where the answers are going to be given before the
17 questions are asked. That's the way Ralph has structured
18 it, and I think that that's actually very useful and, very
19 literally, it is the case that you all will be providing
20 the answers to the questions that are in my mind and in
21 Andy's mind and in Jim's mind. You also are going to help
22 us really frame those questions, so we are very, very

1 grateful.

2 I would like to ask Commissioner Barrett if he
3 has a statement, and then I will read Commissioner
4 Quello's statement. Jim, unfortunately, is under the
5 weather and will not be able to be in attendance, except
6 possibly later as the session goes on.

7 In any event, he and his staff will, of course,
8 have available to them all of the information that is
9 generated today and tomorrow.

10 Do you want to comment?

11 COMMISSIONER BARRETT: Just briefly,
12 Mr. Chairman. I think you have pretty much covered my
13 point of view. In looking around the room, I'm so glad
14 that you and I don't have to serve with this five people
15 to our right, because we'd probably be on the bottom in
16 terms of knowledge, I think.

17 I think that I, basically, Mr. Chairman, want to
18 thank the staff. I think they've worked long, hard hours,
19 and they've done a great deal of work, and there is a
20 great deal, obviously, left to be done. Certainly, my
21 interest in this item and in these matters is no minor
22 one.

1 I also want to thank the participants who have
2 taken time out of their busy schedule, I think, to further
3 educate us. I jokingly told Dr. Robert Pepper last week,
4 out of all the years I've known Roger, I've never known
5 Roger to be on a panel. It's going to be interesting to
6 see how Roger works with a Panel.

7 I do want to thank all of you for taking time
8 out of your busy schedule. I think that this is part of
9 what I constantly hear our chairman talk about, and I
10 think if we do this the right way it will, in fact, have
11 some economic benefits towards economic development and
12 certainly will create new providers.

13 I certainly want to thank you once again for
14 coming to educate us, and just really want to thank you,
15 even though I may have disagreed with sometime on staff,
16 for having done an excellent job, I think, of putting
17 forth all of the parameters and all the important issues,
18 I think, for the next day and a half that I think are
19 important if we are to see this technology deployed and to
20 see those, if, in fact, the demand is there, the
21 beneficiaries of the action of this Commission and
22 certainly under the leadership of this Chairman.

1 Thank you very kindly, Mr. Chairman.

2 CHAIRMAN HUNDT: Let me read Jim's statement
3 without editing it in any respect, I assure you. We'll
4 make it available to you:

5 "I wish to welcome the participants to these PCS
6 Task Force Panel discussions and thank you in advance for
7 your assistance in turning the vision of personal
8 communication services into a reality.

9 These Panel discussions do not constitute a
10 meeting of the FCC. That is, no decision of the
11 Commission will be taken at these meetings. They are,
12 however, important to the Commission's decision-making
13 process.

14 The PCS Task Force has been charged with the
15 responsibility of assisting the Commission in reviewing
16 the issues on reconsideration. The presentations will be
17 entered into the record of Docket No. 90-314, and
18 therefore will become part of the basis for this
19 Commission's decisions on reconsideration.

20 These Panel discussions are the latest in a
21 series of administrative proceedings by which the FCC has
22 sought to bring the benefits of a family of advanced lower

1 cost, mobile communication services to the American
2 public.

3 Following an extensive notice and comment,
4 administrative process, which included an en banc hearing,
5 a Commission policy statement, seriatim, Notices of
6 Proposed Rulemaking in this docket, and corollary
7 proceedings and related dockets, and internal cross-bureau
8 task forces, the FCC issued our decisions on the multitude
9 of regulatory and technical issues engendered by the
10 innovative family of mobile communication services, known
11 collectively as PCS.

12 The Commission acted in a timely and responsible
13 manner to establish the regulatory parameters so that
14 American entrepreneurs and manufacturers could bring the
15 benefits of lower cost, ubiquitous, mobile, next
16 generation communications to the public.

17 The Commission's decision on interalia and
18 appropriate spectrum allocation plan eligibility rules and
19 licensing procedure, were driven by the overriding
20 objective fulfilling our statutory mandate.

21 The Commission devised an efficient allocation
22 plan that drives providers toward the most advanced

1 technologies and provides the building blocks for
2 economically viable categories of diverse competitors to
3 assemble their spectrum needs, to fit their business
4 plans, while providing incentives to associate with
5 congressionally-directed new entrants.

6 These complex and interrelated issues are now
7 the subject of approximately 66 petitions for
8 reconsideration. The Commission is acting responsibly by
9 creating the PCS Task Force to assist us in resolving the
10 issues on reconsideration and move with all deliberate
11 speed to begin the licensing process.

12 The Commission's PCS proceedings constitute a
13 milestone for U.S. manufacturers and entrepreneurs wishing
14 to provide the public with new personal communication
15 services and for the American consumer who is always
16 seeking more advanced, more efficient, and less expensive
17 means of communicating.

18 Demand studies suggest that if the FCC licenses
19 new PCS providers during 1994, there could be well over 20
20 million new subscribers by 1997.

21 The defining and significant feature of these
22 new services is that they promise person-to-person rather

1 than location-to-location communications. They will be
2 engineered to the individual user, not to a residence,
3 business, automobile, or other similar physical location.

4 The information will be transmitted by networks
5 encompassing elements of wireless, fiber, and satellite
6 systems that is technologically transparent to the user.

7 This Commission has learned from the costly
8 delays in uneconomic licensing processes used in other
9 services. I am determined to move this process along as
10 quickly as possible. We are striving to create a PCS
11 marketplace that is open and competitive, one in which
12 customers will be able to choose from among multiple
13 service providers to obtain the best rate and service
14 possible.

15 New entrants and eligible current communications
16 services providers should be allowed to compete to provide
17 PCS services.

18 I am especially interested in minimizing the
19 regulatory burdens on what promises to be a vigorously-
20 competitive wireless communications market.

21 To assist the FCC in its task, I ask that you

1 address seriously the issues to be explored during the
2 next day and one-half. Do not use this opportunity to
3 merely restate your position; rather, engage each other in
4 debate.

5 I remain confident that the FCC can resolve the
6 few remaining issues on reconsideration expeditiously. I
7 look forward to the day in the near future when the
8 American public enjoys the benefits of a robust personal
9 communications services marketplace."

10 Let me thank Jim for those comments. Without
11 further ado, I turn the proceedings over to you, Ralph.

12 MR. HALLER: We are about to embark on the final
13 decisions in one of the most important proceedings this
14 Commission will take up, probably in this decade. We have
15 before us the potential of a technology that, in fact,
16 will change people's lives, perhaps as important as the
17 original development of the telephone or the beginning of
18 broadcasting.

19 So what we are doing, we look at as a very, very
20 serious matter, but one that is going to improve not only
21 the way of life but improve the economy, create jobs, and
22 provide much greater universal access.

1 Radio can go where it's difficult to put wires,
2 and that's one of our goals here.

3 As we go through the proceedings today, I would
4 ask the panelists to keep those basic goals in mind and
5 tell us how we can make decisions that will make PCS
6 economically viable and provide it in a very speedy manner
7 to the American public because that's what we're all about
8 here.

9 With that charge, I will turn the first panel
10 over to Dr. Robert Pepper, who will be moderator. Again,
11 Dr. Pepper is the Chief of the Office of Plans and Policy.

12 Bob.

13

14

PANEL I

15

DR. PEPPER: Thank you, Ralph.

16

17

18

19

The first panel this morning is going to examine questions of demand for PCS services. We have seven panelists, each of whom have been involved in conducting studies, looking at several factors.

20

21

The first question that we've asked them to address is: What services do you believe will be

1 encompassed by personal communication services? What are
2 the services that you see evolving and being rolled out
3 over time?

4 Secondly, what is the overall demand for
5 personal communication services, not only in total, for
6 all wireless services, but also, if you've identified in
7 your studies various segments of the wireless market, how
8 do you see that evolving.

9 Also, we would be very interested in hearing
10 about how you conducted your studies. One of the
11 interesting questions that we're always confronted with
12 is, how do you know about something in advance of knowing
13 about it? When you're rolling out new services, you're
14 talking about the future, and it's always difficult to
15 predict the future.

16 We're interested in hearing about how you
17 conducted the studies that you're going to report on
18 today.

19 We're very fortunate to have, as I mentioned,
20 seven studies and seven experts here presenting to us.
21 The first is Tom Stroup from the Personal Communications
22 Industry Association.

1 He will be followed by Dave Twyber, who is
2 President of the Wireless Systems Group, from Northern
3 Telecom;

4 David Kerr from BIS Strategic Decisions will be
5 next;

6 Mark Lowenstein, who is the Director of Wireless
7 Mobile Communications will be here. He's from the Yankee
8 Group;

9 Dan Trampush from Ernst & Young. Dan is the
10 National Director of Telecom Consulting;

11 Elliott Hamilton is a substitute for Ann
12 Deroskow from EMCI, for those of you have the agenda that
13 was out there; and then,

14 Dr. C.J. Waylon, from GTE Personal
15 Communications Services will wrap up the five-minute
16 presentations, and then what we'll do is have questions
17 and follow-ups.

18 You will have an opportunity, also, to talk
19 amongst yourselves.

20 Tom, why don't you begin. I think you have some
21 charts as well.

22

TOM STROUP

1 serve all sorts of needs that only our imagination can
2 understand, and I would like to be part of that, with the
3 commission's making the opportunity available as this --
4 the ultimate result of this hearing, and the ultimate
5 licenses and allocations evolve.

6 MR. PEPPER: Mr. Hamilton.

7 MR. HAMILTON: Let me reaffirm that I believe
8 that the licensing process should not be delayed due to
9 revisions of the current rules.

10 The FCC should not guarantee success in the
11 market place by guaranteeing, through our knowledge today,
12 what will succeed. They should allow the chance for
13 success.

14 Our own companies have been -- have been
15 something with a lot of entrepreneurial type of
16 individuals, smaller individuals, who want to -- who wants
17 that chance to be in the market place. They're not asking
18 for a guarantee of success. They are looking for that
19 chance, and I believe the entrepreneurial spirit in the
20 United States will overcome what -- if there's any
21 obstacles that the FCC licensing process has now has.

22 MR. PEPPER: Mr. Twyver.

1 MR. TWYVER: Yes. Just a brief comment. I
2 would hope that seven years from now, we're looking back,
3 and services are deployed beyond our imagination, and
4 we're not -- we're not doing studies or debating or
5 considering how we did this in rural America. It's
6 already happened. That's all I have to say.

7 MR. PEPPER: Mr. Lowenstein.

8 MR. LOWENSTEIN: In the ideal world, we wouldn't
9 have a debate, and we'd beginning the spectrum options
10 tomorrow, and I think at the same time it's important to
11 recognize that this must be done -- that this must be done
12 right in the interests of the people who would be
13 potential users of the service, particularly those who are
14 not currently wireless users who would like to be wireless
15 users.

16 For instance, lower prices for their service
17 because of the high -- relatively high price of cellular
18 has perhaps kept them away to date, the worry of being out
19 of coverage range, the fact that we have islands of
20 coverage being a fairly significant concern.

21 I think it's an environment where we have many
22 new competitors in the market place is a very positive

1 one. If you look at England, for example, and the mercury
2 one to one PCM service that's been developed, it's not
3 only created demands for their own service, but it's
4 stimulated demands for all its types of wireless service
5 and all the wireless providers such as in London from the
6 instruction of that type of service.

7 But, it's also, at the same time, important to
8 recognize the strengths of the incumbents in terms of
9 having built wireless market in the first 10 years,
10 particularly in the cellular arena, and the fact that they
11 have bought a very sophisticated network has been
12 deployed, and it's getting more sophisticated all the
13 time, and that they will, too, be able to participate in
14 the PCS, as well.

15 MR. PEPPER: Thank you. Mr. Hulak.

16 MR. HULAK: PCS represents a strong opportunity,
17 despite some of the potential barriers and obstacles that
18 have been raised today. Seventeen million subscribers and
19 \$6 billion in service revenues is still a healthy market.

20 In the ideal world, perhaps things should have
21 been done differently with respect to -- the realities
22 are, there are only two or three strong vehicles survive

1 at the end of the day, in our opinion.

2 That said, it's better, we think, to keep this
3 market off and get it rolling. Those who really want to
4 delay, I suggest, need to question why they want to delay.

5 So, reluctantly, I say we should move forward
6 with the currently licensing fee.

7 MR. PEPPER: Mr. Twyver.

8 MR. TWYVER: I think it's obvious with 5,000,000
9 new cellular subscribers last year and cellular tariffs
10 that the consumers are ready. It's obvious the potential
11 licensees are ready by their efforts in discussions with
12 you and planning for the licenses.

13 The products are ready. Northern telecom
14 recommends that the present order be reaffirmed with some
15 minor technical corrections and we get on with the
16 licensing.

17 MR. PEPPER: Mr. Stroup.

18 MR. STROUP: We certainly covered more than just
19 demand forecasts in our session today, and one point that
20 you made is that we are dealing with an auction
21 environment.

22 Companies will have the opportunity to evaluate

1 whether they're going to bid on a 10, 20 mega-hertz system
2 and adjust their prices accordingly. Capital investment
3 for a 20 or a 10 is likely to be less than for a 30 mega-
4 hertz system.

5 I think all of the forecasts you've heard today
6 has shown that the industry has tremendous potential.
7 From the industry prospective, we're already shown six
8 months behind schedule.

9 I think that it would be not only a shame but
10 have tremendous impact on the competitiveness of the
11 industry going forward if we were to delay it another six
12 months.

13 So I guess my urging to the commission would be
14 to continue to move forward. As I noted earlier, I'm
15 delighted to hear that this is intended to expedite the
16 process. Thank you.

17 MR. PEPPER: Thank you. I think that -- thank
18 all the panelists, because it's been very informative. We
19 have aired a lot of issues beyond just demand, because, of
20 course, demand is based upon a lot of assumptions, we had
21 to delve into some of those assumptions.

22 I think it's quite correct, and I think

1 everybody here would agree, and the commissioners would
2 agree that moving as rapidly as possible is in the
3 public's interests, but getting it right is in the
4 public's interests, as well.

5 I guess personally I'm not clear why the
6 industry thought that we'd actually be holding, you know,
7 the auctions this summer. I don't see anything that we're
8 doing is delaying the roll out of the service.

9 I think the expectation for the service are
10 quite substantial. I think that whether it's 17,000,000
11 or 29,000,000, at the end of the day we're going to have
12 millions and millions of new customers for a new billion
13 dollar industry that's going to be based primarily upon
14 U.S. engineering and technology.

15 I think that this afternoon we're going to hear
16 from a panel of economists who will talk about competitive
17 questions. We're also going to hear from a panel of
18 investors from Wall Street investment bankers, a big Wall
19 Street firm, in terms of the importance of what we do in
20 terms of attracting capital, so that we can have a rapid
21 roll out in the market place.

22 We've been focusing a little bit, I think, too