

The Claim - Major Trading Areas (MTAs) Have Advantages Over Basic Trading Areas (BTAs)

- Elliott Hamilton of EMCI observed that "we see PCS having some unique advantages. . . . One of them will be the MTA license definitions. We believe the wide area -- starting out with a very wide area license -- will give them an advantage over some of the other industries, starting out." April 11 Transcript, at p.65.
- David Kerr, BIS Strategic Decisions, observed that MTAs will overshadow BTA licenses. *Id.* at pp. 32-33.

The Reality - Assumptions About the Marketplace Impact Conclusions about Viability

- In fact, the greatest challenge to the viability of the BTA licenses may be the MTA licenses, based on the reaction of the financial panelists.
- As Dr. Waylan of GTE noted, the BTA geography offers the advantages of being larger than cellular MSAs and RSAs, but it may be too small to permit effective competition against significantly larger 30 MHz licenses. *Id.* at pp. 54-55.
- However, Mr. Herb Wilkins of Syncom supported small license areas and smaller blocks as calculated to promote both greater opportunity and the development of niche services which he considered crucial to achieving competition. April 11 Transcript at p.291. Larger license areas and blocks both reduce the numbers which are available, and place those which do exist out of the financial reach of many would-be players. *Id.*
- Limond Grindstaff of Airtouch stated that their studies "support the BTAs, and the economics for the BTAs are much better than the MTAs. The cost of the license for the MTAs really puts your business on the negative for a lot longer than the BTAs where the license . . . will be less expensive and that you can concentrate your business[.]" April 12 Transcript at p.113.

The Claim - The Markets Will Hesitate to Fund PCS

- Al Houston of AT&T Network Systems provided a brief explanation of the desire of investors to minimize risk and maximize returns, and the degree to which numbers of licenses, small geographic areas, and other factors may cause PCS to fail to appeal to investors, either debt or equity. *Id.* at p.228.
- Al Houston expressed the belief that PCS will be funded through equity. *Id.* at pp.229-30.
- Paul Rissman of Alliance Capital projected that in two years the potential subscriber base for PCS will be "25 to 30 percent penetrated with existing cellular services. Everything will be digital. Costs will have declined for the incumbents. . . . It will be a very full service cellular incumbent environment." *Id.* at p.239.
- Nancy Peretsman of Salomon Brothers drew upon the examples of the financing of ESMRs, cellular companies, cable companies, other telecommunications entities by investment banks -- tying the investment to demonstration of a franchise value, of the willingness of other parties to acquire the property. She also made it clear that early strategic money or deep pockets were factors in the funding of those industries. *Id.* at pp.245-56.

The Reality - Wireless Services Have Received Funding in the Recent Past, and Should Continue to Do So

- Commissioner Barrett drew from the three financial analysts the admission that none of their responses were based on technical considerations, but on the economic consideration that -- as Ms. Peretsman put it -- at some point the more competition in the marketplace the more uncomfortable they are with it. *Id.* at p.276. In short, they want a guaranteed return, and as little risk as possible, and big blocks with as few players as possible appeals to them.
- In spite of some self-description as investors in growth opportunities, the position of the financial analysts is summed up in Mr. Rissman's statement that "I don't get paid for having vision. I get paid for spotting money-making opportunities." *Id.* at p.333.
- Given his own statement that they "bought lots of cable stocks in the fall because we thought it was a good investment," [*Id.*] Wall Street's ability to project the future is more than a little questionable.

The Claim - The Markets Will Hesitate to Fund PCS

● Mark Roberts of Alex, Brown & Sons, argued that the competitive prospects of PCS are advantaged by leveraging off of existing telecommunications networks, using "a minimum of 30 MHz of contiguous spectrum. . . minimum of an MTA license size." *Id.* at p.248. He argued that these elements were necessary to achieve a similar cost structure to cellular -- describing blocks of less than 30 MHz as "permanently lock[ing] in premium investment returns for the cellular industry inhibit[ing] PCS deployment and . . . their ability to raise capital." *Id.* at p.249. He opposed aggregation as a factor delaying deployment, reducing expected investment returns, and raising the cost of capital. *Id.* at pp.249-50.

● Both Ms. Peretsman and Mr. Roberts described 30 MHz blocks and MTAs as the minimum viable market. *Id.* at pp.325-26.

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● Actually, this is no surprise, since both speakers stated their preference for 30 MHz blocks, and antipathy for aggregation. However, such a proposal is entirely contrary to the idea of using the competitive marketplace as a discovery mechanism to drive the most efficient allocation of resources, and the most efficient production of cost-effective services.

● Mr. John Oxendine also criticized Mr. Roberts' thesis, observing that "we could take the whole 120 and give it to one person and be very efficient that way. The operation would be successful but the patient would be dead in that democracy wouldn't be served and there wouldn't be a whole lot of people involved." *Id.* at p.255.

The Claim - The Markets Will Hesitate to Fund PCS

- David Kerr of BIS Strategies thinks that it will be hard to raise capital outside of the top 10 to 15 MTAs. *Id.* at pp.67-68.

- Financial panelist Mr. Rissman suggested that markets with 150,000 to 200,000 customers *per carrier* are "not all that viable." *Id.* at p.281.

The Reality - Wireless Services Have Received Funding in the Recent Past, and Should Continue to Do So

- Dr. Hausman expressed the opinion that the capital markets will fund PCS, as they have funded ESMRs, and that aggregation will not be a problem. April 11 Transcript at 215.

- In fact, the companies most interested in and capable of raising money and bidding for PCS licenses in markets across the entire nation face the prospect of restriction from the marketplace. Cellular companies already provide voice service and have the most incentives to go beyond their current geographic boundaries and to provide new services both in- and out-of-region.

- This pessimism is astounding, since such customer numbers can equate to an annual cash flow per market of between \$36 and \$96 million (assuming average monthly bills between \$20 and \$40 -- such figures having been suggested by various PCS proponents). But, then again, there were critics who believed that the similarly-sized cellular RSA markets were not viable.

- Dr. Jacobs also observed that applications attuned to BTAs are feasible, if a BTA-based system is adopted. *Id.* at p.118.

The Claim - Big Blocks Are Necessary for PCS Funding

- Donald Gips asked what size spectrum blocks were necessary in order to obtain financing.
- Paul Rissman indicated that "right now we don't know what the size of the spectrum award is that will work. We have consultant studies that say 20 MHz is fine. We have consultant studies that say 30 MHz is fine. We have consultant studies that say you need at least 40 MHz." Noting that in the U.K Mercury One-2-One has 50 MHz, he observed "What we would like to see is a spectrum grant that we know is going to work. We do not want to see a spectrum grant where we will be scratching our heads saying, boy, if this doesn't work our money is down the drain." *Id.* at pp.250-51.
- Mr. Roberts stated that he thought 30 MHz "appears to be about the minimum size particularly if you are going to deploy services in third and fourth-tier markets" and provide multimedia services. *Id.* at p.252.
- Mr. Roberts indicated that his firm has raised about \$ 400 million in the past six months for technically sophisticated potential PCS entrants -- but when given an example indicated that they would probably fund a PCS licensee after winning the license, rather than before. *Id.*

The Reality - A Broad Range of Possibilities Exist, and Predictions Are Based on Case-Specific Assumptions

- Mr. Wilkins disagreed with the premises advanced by the various bankers saying that "this is an industry that is going to be around for quite a long time. To structure it now so that it merely rides on the basis of what technology exists, ignores the fact that there are probably entrepreneurs right in this room who have ideas who would allow the development of the spectrum in such a way with different technology to serve different market interests."
- Mr. Wilkins observed that the financiers and the Commission appear to be assuming that the spectrum will be used solely to deploy cellular service, and not for innovative applications, and stated "If the Commission goes the way of the Wall Street we will have pure cellular systems competing head to head on the basis of price, solely on the basis of price without anybody making any money and without the country having the kind of service that we would all like to see it have." *Id.* at pp.271-72.

The Claim - Big Blocks Are Necessary for PCS Funding

● Peretsman and Rissman indicated that they would fund the largest blocks, in the largest markets, and that aggregated blocks in the larger markets might get funded (Peretsman), but that smaller blocks and smaller markets would not get funded without aggregation into MTA sized entities. (*e.g.*, Rissman, pp. 268-70).

● Mr. Roberts responded to Mr. Oxendine by noting that cellular after-market transactions were still on-going, and that he would want to know what a new PCS provider's plan was for competing with cellular, its cost structure, and marketing strategy -- and that the resulting capital would be difficult to find and expensive by contrast with the existing cellular service provider's cost of capital. *Id.* at pp.259-60.

● Mr. Roberts responded that "I don't think that just legislating alliances or regulating alliances will result in the sort of service proliferation and the prices falling to the point that consumers will be benefitted." *Id.* at pp.262-63.

The Reality - A Broad Range of Possibilities Exist, and Predictions Are Based on Case-Specific Assumptions

● Mr. Wilkins responded by saying that blocks of more than 30 MHz were approaching overkill, noting that smaller blocks such as ESMR uses are being funded, and that a ubiquitous digital service could be provided with 20 MHz. *Id.* at p.253.

● Mr. Oxendine criticized the larger blocks as advantaging the bigger players in the capital markets, and argued for more uniform spectrum block sizes in order to foster participation, cooperation, and partnering. *Id.* at p.256. In response to a panel question, he noted the advantages which the larger players will have in establishing strategic alliances and joint ventures, noting that "I'm suggesting that we open it up so everybody can play. And I don't hear that from your side of the table." *Id.* at pp.258-59.

● Mr. Oxendine responded by noting that Mr. Roberts had assumed exclusivity, the nonexistence of partnerships or alliances with cellular and other players. *Id.*

The Claim - the Proposed Spectrum Allocation for PCS is Impractical for Subsequent Aggregation

The Reality - Multi-based/Multi-mode handsets are feasible and are being developed

- John Battin indicated that "I think that this [the difference in cost between a handset that works from the current unlicensed band to the 1800 band and a handset that works from the current unlicensed band to the 2100 band] somewhat depends on the technology that you use, but I think in most of the technologies it's relatively inexpensive. Maybe it's 5 or 10 percent to have a subscriber unit that can interoperate in unlicensed band, you know, let's say within the one dot eight range. But shifting up to two dot one, you know, it's probably in that 20 to 25 percent range." April 12 Transcript at p.124.

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The Reality - Multi-based/Multi-mode handsets are feasible and are being developed

● Dr. Irwin Jacobs, of QUALCOMM, stated that "Our system which uses a 1.25 megahertz bandwidth with extensions to 5 is compatible with a 10 megahertz and larger allocations. We are pursuing dual mode/dual band equipment that will operate in both the 800 megahertz cellular band and one or both PCS bands. However, the dual 1.8 [GHz] and 2.1 [GHz] equipment; that is the one covering both the lower and the upper PCS bands, that would result in what we estimate now to be about a 20 to 25 percent increase in cost and weight over 1.8 megahertz only. And, in fact, the dual mode -- frequency band AMPS and 1.8 would only be, perhaps, a 15 to 20 percent increase; a little bit less expensive." April 12 Transcript at pp.44-45.

● John Battin, of Motorola, indicated that "the way it looks now is that there will be many requests for dual mode -- most of any one operator may get a 20 megahertz license, a 20 -- a 30 megahertz license and also a 20 megahertz license of a two dot one. And so, therefore, we will be building subscriber units that try to span all of those frequencies. And I agree with Irwin; that that's a 20 or 25 percent premium. So it's not just an issue of, hey, I have a 10 megahertz license. If you're in this business on a pretty wide scale basis, you may have a 30, a 20, a 10, and so you have to build both those subscriber units that can cover all of those frequencies." *Id.* at pp.69-70.