

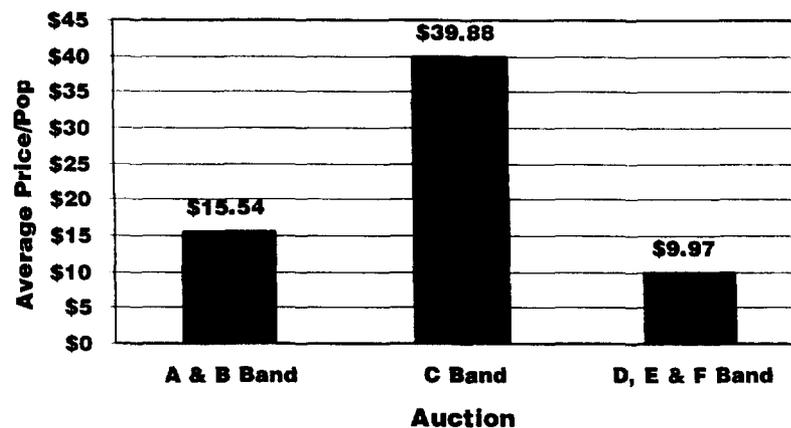
# U.S. Telecommunications

## D/E/F Band PCS Auction Results In Lower Spectrum Prices But Another Win For CDMA Proponents

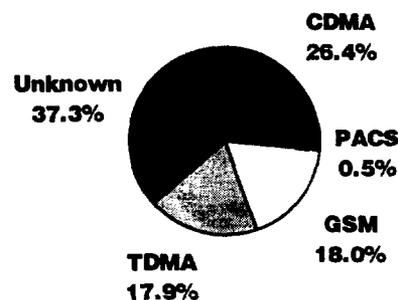
January 28, 1997

The FCC's auction of the last three personal communications services licenses ended on January 14, 1996. In this report, we provide an analysis of the outcome of the auction. In our view, four developments with broad implications for operators and equipment providers bear mentioning.

### 1. Spectrum Prices 75% Lower Than C Band Auction



### 2. CDMA Again The Big Winner—Buy Lucent Technologies



### 3. Sprint and AT&T Gain National Coverage—Both Rated Hold

### 4. GSM Proponents Can Now Claim National Coverage

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## **D/E/F Bands Personal Communications Services Auction Produces \$2.5 Billion or \$10 Per Pop**

The Federal Communications Commission (FCC) completed its auction of the last three blocks of personal communications services licenses when the auction for the D, E and F band licenses ended on January 14 after 276 rounds. The FCC raised just over \$2.5 billion in the auction, which works out to \$9.97 per 30 MHz pop for all three licenses. Since these licenses only allow the use of 10 MHz of radio spectrum, versus 30 MHz for the A, B and C band licenses, we adjust this to arrive at a price per 30 MHz pop.

### **Spectrum Prices Drop 75% From C Band Auction in May**

The gold rush atmosphere that pervaded the C band auction which ended in May, 1996 did not carry over to the D/E/F bands auction, with the price per 30 MHz equivalent pop falling 75% from the \$40 paid by the small company participants in the C band, to only \$10 in the D/E/F bands auction. This is also down roughly 35% from the A and B band auction held in 1995, which was dominated by the major U.S. telecom carriers. We see two factors behind the crash in the market for radio spectrum:

- First, most of the major U.S. telecom carriers that wanted a wireless telephony license either already held one of the two cellular licenses in their markets, or had successfully bid for licenses in the A/B bands auction. As we note later, in the few markets where two or more major telecom operators did actively compete, license prices reached record highs.
- Second, we believe that the difficulty many of the C band auction winners had in raising financing has diminished the appeal of the business to others that fear they may not have access to the capital markets if they did win licenses. By our count, C band participants have filed with the SEC for offerings to raise over \$700 million in equity and \$700 million in debt. Despite the fact that some of these companies initially filed last summer, none have yet to successfully raise any public capital.

### **C Band Winners Have Yet To Raise Public Capital**

	<b>Proposed Ticker</b>	<b>Initial Filing Date</b>	<b>Equity (mils)</b>	<b>Debt (mils)</b>
NextWave Telecom	SURF	6/10/96	\$300.00	\$400.00
General Wireless	GWIR	6/28/96	\$189.75	\$220.00
Pocket Communications		8/29/96	\$172.50	N/A
Chase Telecom	CTEL	10/2/96	\$80.50	\$105.00
<b>Total</b>			<b>\$742.75</b>	<b>\$725.00</b>

Source: Securities and Exchange Commission and SBC Warburg Inc.

*The*  
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## **PERSONAL COMMUNICATIONS SERVICES (PCS)**

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### **D, E and F Auction Prices Surprisingly Low**

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The final auctions, the so-called D, E and F Blocks for broadband PCS were awarded on January 14 after 275 rounds of bidding, which had begun in August 1996. The ultimate price of \$2.52 billion, net of the F Block discounts, for a record 1,479 licenses by 125 bidders amounted to only \$3.32 per pop, substantially below the \$27 per pop paid in the C Block last year, adjusting for the difference in spectrum—10 MHz versus 30-by tripling the latest bid numbers. (In other than the largest markets, 30 MHz is not often needed, so tripling is perhaps overstating the relative value). With \$10.17 billion from the C Block and \$7.73 billion for the A and B rounds, (or \$15 per pop for 30 MHz wide area A and B licenses) the total bid at auction from all rounds was \$20.42 billion (excluding narrowband paging, SMR and other auctions) assuming the government actually collects all the money. There is some concern—particularly with the C Block, which brought in the most, and where payments are due over time rather than all upfront—that some of the winners will ultimately default. Those licenses would presumably be put up for bid again, but in view of the much lower D, E and F round prices and time to market considerations, it is virtually certain that any rebids would be at substantially lower prices. In the recent bids, a 5% down payment was required January 23, with another 5% due when licenses are officially granted probably very shortly. The rules were changed somewhat this time in some ways to be more liberal—i.e., that only 25% of the licensed area population has to be built out in five years compared to 80% in the first awards; and in some ways to be more conservative—i.e., the discounts and payment terms for the F Block winners are less favorable. The F Block down payment is 20% instead of 10%, and the government loans are interest only for only two years, not six as with the C Block.

Of the bidders, one-third were new, and they included 70 led by minorities, 50 by women and 167 by rural companies, largely in the F Block. Among the more interesting new players was Sprint Corp. on its own rather than Sprint Spectrum, although the latter will manage the Sprint properties; U S WEST, which also bid at the corporate level, as opposed to via U S WEST New Vector; North Coast whose principal is related to Charles Dolan, CEO of cable company Cablevision Systems (North Coast bid in Cablevision Systems' cable markets as it had in the C Block) and Rivgam/Aer Force in which investor Mario Gabelli is a principal (Aer Force was a vehicle for the F rounds, which require small business status). It is also interesting that Omnipoint and Western Wireless (WWCA) ended up with 10 MHz each in certain markets where it is unlikely either would build alone, suggesting a partnership there. WWCA already has a partnership with Cook Inlet through which it bid in both the C and F rounds. In Sprint's case, the apparent reason for the stand-alone bid was that the company is more enthusiastic about PCS than its three cable partners (Tele-Communications, or TCI, Comcast and Cox); in fact, there has been recent publicity about TCI and Comcast's interest in getting out of the venture. With USW the likely ultimate merger and then sale of the New Vector properties into AirTouch, the telephone company will be removed from direct participation in wireless, particularly if U S WEST Media Group, now a tracking stock, is spun out to shareholders entirely, which we expect to happen.