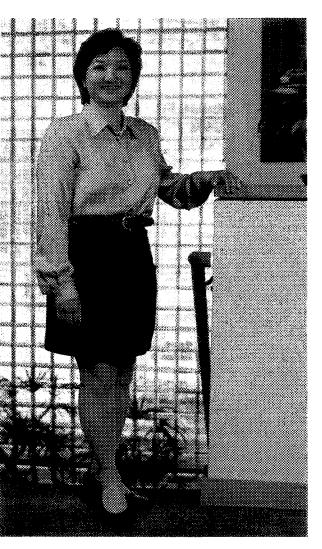
WIRED FOR WIRELESS

Hawaii beats the national average when it comes to wireless phone usage per capita. That's just what Sprint Hawaii's Nonie Toledo likes to hear.



Nonie Toledo Regional Vice President and General Manager of Sprint Hawaii

riceless communication divisions are quickly becoming to telecommunication companies what personal computers are to the suburban domicile: Every telecom should have one.

Case in point: In April, AT&T Corp. announced its intention to buy 13-year-old Honolulu Cellular—Hawaii's pioneer wireless communications company—from BellSouth Corp. for a rumored \$160 million. The move came on the heels of Sprint Hawaii's

acquisition of two-year old PrimeCo Personal Communications' Hawaii holdings in October 1998 for an undisclosed amount. More than a local phenomenon, telecom consolidation is a trend being played out in markets nationwide as wireless companies trade networks and markets like chattel to create larger communications clusters, and large telecom conglomerates seek acquisitions to offer and bundle assorted services for customers.

Wireless is the most rapidly growing form of voice communications worldwide, with most of that growth coming from business markets. According to market researcher Dataquest Inc. in a recent Business Week feature, businesses currently generate 47 percent of wireless revenues in the U.S. The number of wireless customers nationwide has risen 25 percent in the last year alone to 69 million, according to the Cellular Telecommunications Industry Association. Dataquest estimates that by 2003, wireless will account for 15 percent of total communications minutes nationwide, up from 3 percent today. Now that wireless voice has made the inroads nationwide that it had in Hawaii from the start, the final frontier for wireless will be leveraging its untapped and largely unlimited data

applications. With billions of dollars in lost revenue potentially on the line, joining the nationwide wireless lovefest is a move that the AT&T's, MCI's and Sprint's of the world can't ignore.

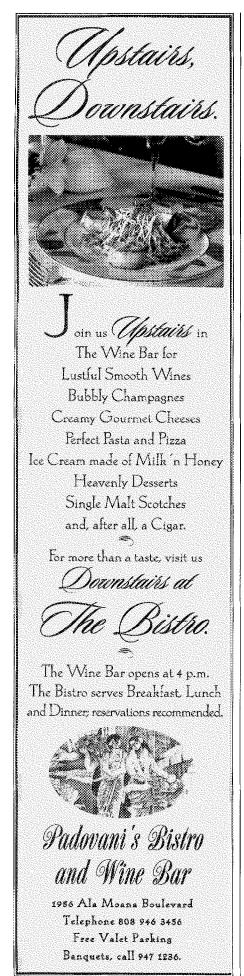
Here in Hawaii, the wireless phone has come a long way since the days when four-pound cellular behemoths costing up to \$3,000 apiece simultaneously wowed and terrified potential customers in downtown Honolulu demonstrations. Thanks to increased market competition and improved

technology, unit sizes and per-minute rates have dropped significantly, while access and capabilities have soared. Some studies estimate that one out of every three Hawaii residents has a wireless phone—one of the highest percapita rates in the nation. There are currently about a half dozen Hawaii companies offering an array of wireless flavors from the more versatile digital PCS technologies to their increasingly lethargic analog cellular cousins.

Sprint Hawaii was born of the acquisition of Hawaii-based long distance carrier Long Distance/USA by Sprint Corp. in 1989. Sprint Corp. amassed revenues totaling \$17.1 billion in 1998, up 13.2 percent from previous year figures of \$15.1 billion. The corporation's wireless division, Sprint PCS Group, reported sales revenues of \$1.23 billion last year. Sprint Hawaii took in sales revenues of \$308.9 million in 1998, up 9 percent from \$283.4 million in 1997. The company has 350 Hawaii employees.

Joanne "Nonie" Toledo has been the regional vice president and general manager of Sprint's Hawaii operations since 1997. A 1975 graduate of Maryknoll High School, Toledo was raised in Kailua. After graduating from the University of Hawaii-Manoa in 1979 with a BA in International Business, Toledo worked for eight years in Xerox Corporation's Honolulu offices before moving to San Francisco and a position managing the company's national accounts. In 1990, Toledo accepted a position as Midwest and Southeast Regional director for computer peripheral company Array Technologies. Joining Sprint Corp. in 1992 as national account manager for the west and Southwest, Toledo eagerly accepted a promotion to regional sales director of Sprint Hawaii that would bring her back to her roots.

Since assuming the helm of Sprint Hawaii, Toledo has put most of her energy into maintaining as much local-style work ethos and community identity as is possible for an arm of a national telecommunications giant. Toledo's efforts have resulted in Hawaii being Sprint Corp's only



regional market to have its customer service, sales and operators localized rather than routed to national switchboards on the mainland. Sprint Hawaii is also allowed to develop independent marketing, promotional and advertising campaigns.

PrimeCo Hawaii is acquired by Sprint. Honolulu Cellular is bought out by AT&T. Why are local wireless companies suddenly hot acquisition prospects for national communication companies like Sprint and AT&T?

I'll talk about Sprint first. First of all, our commitment is to be the national wireless carrier of choice. Obviously, you need to be in every state to do that. So for us, it finished out our (national) footprint. It made sense for Sprint Hawaii because we want to be the telecommunications provider of choice for Hawaii. To do that, you need to carry a well-rounded mix of products. So we viewed the PrimeCo acquisition as a perfect way of doing this. We had already purchased a license a couple of years ago to start building out our PCS network. When we heard that PrimeCo wanted to sell, we looked at the technology that they were using. There are different technologies in wireless. Cellular and digital are the two main business drivers. Digital has better quality and better clarity. You can push data over it versus just voice. Within the digital, or PCS, spectrum of wireless there's CDMA (Code Division Multiple Access) and TDMA (Time Division Multiple Access) technologies. The difference between the two is the amount of data you push through them and flexibility or what you can do with them. Sprint hung its hat on CDMA. AT&T hung its hat on TDMA. Now we're finding that CDMA is the technology of choice. It's kind of like when there was that whole debate between Beta and VHS VCRs and everyone was asking which way everything would go.

Hawaii's wireless potential would seem, at least on the surface, to have limitations that might give the big telecom companies pause. Topographical limitations. A weak local economy. A relatively small population base. Yet the industry has attracted major players and successfully grown and thrived here in a way no other high-tech industry has. Why?

It has traditionally done well because of the demographics of our population. There are high commute times. There are multiple-income families. It's also because of our culture. We want to stay closely con-

nected to our families and to our friends. We not only have high wireless penetration here, but high Internet and PC penetration. We're very technology literate. And I think that because we're on an island, we depend on that so much for communications everywhere. I don't see our population or our economy as limiting factors. We have not seen the economy affecting our sales much. The penetration (of wireless) here compared to the rest of the U.S. is one of the highest. Depending on what study you look at, Hawaii has 26 to 35 percent penetration of wireless. The average for the U.S. is 25 percent. We're one of the highest, if not the highest. Still, if you look at Finland, and some international countries, they're at 58 percent penetration. Part of it is the culture and acceptance. It's also because they've introduced a greater variety of data applications. You can send messages back and forth. Instead of just checking stock prices, you're able to place a stock trade or be informed when a stock (reaches a specific price). These (types of) applications are what are going to drive more growth in this industry.

Despite the increased competition here, small wireless companies still seem to open with some regularity. How do they compete with the big telecoms? Price point?

What you're going to see them do is go after niche markets. Hawaiian Wireless is making a play for small businesses, offering unlimited one-minute, unlimited twominute and unlimited three-minute calls. It appeals to this niche of people who can control their calling habits. That's probably how they will continue to market. What we're banking on and what we're seeing is that when most people get a wireless phone in their hands, they become so dependent on it that the trend is that their minutes of usage just go up. It's such a convenience and prices are so low. No one's being held hostage to high prices. I'm not sure how they will continue to compete and what niche markets (they'll find), but they'll have to be niche players. With Sprint, you've got national company backing, bundles of communications products that you can purchase from us, and a national footprint. When people go to Las Vegas, they can take their Sprint phone and use it there with the same cost as they get here. The small companies can't offer those types of things. So I'm not sure how

they will be able to compete or what their strategy will be in the future.

Has the amount of players that can serve the local market profitably reached saturation?

No. Not at all. Look at the long distance market. There are hundreds of companies that have applications in and (a number of companies) that already provide services here. It's better for the public, because it helps to drive down consumer prices. I don't think we'll be able to support 10 (wireless) companies here. The companies that come in will have

to have the resources and a national footprint to compete.

What's your take on why wireless has seemed to take off with local consumers from day one, whereas on the mainland wireless took a bit longer to appeal to anyone outside of the BMW crowd?

Again, I think commute time has been a driver. I think that the pricing has made it more affordable for more people to own a phone. Also, there are a lot of small businesses here. If you look at our demographics, (the major-



ity) of our companies here in Hawaii are small businesses with less than four employees. So you've got a lot of small business owners who can't afford to be in the office tied to their phone. They've got to be mobile, on the road, and able to respond to their clients or to their prospects.

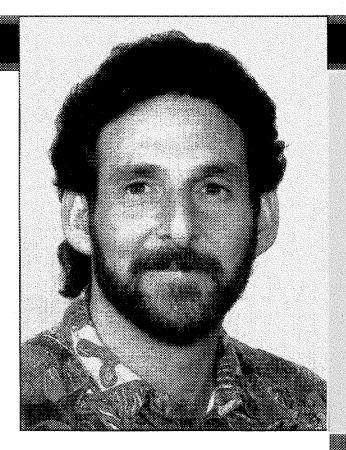
Are there identifiable markets for wireless here?

It depends on how you're going to do your pricing plans. For us, anyway. Our markets are either the lowvolume users who want it for safety in their car or the higher volume users who want to use it for their business. So there's probably two dichotomies of users...ones that use it very little and ones that use it a lot.

How does the wireless industry measure how much it can grow in Hawaii?

We look at penetration and then at minutes (of use). To increase usage, I think there's got to be more than voice. The really big growth is going to be in wireless data. And we haven't even seen the effects of that yet. Mainly because, to date, data

applications (on wireless) don't have high enough speeds. You can't check the Internet or a Web page through your phone. First of all, the technology of the phones has to be upgraded. Second of all, the network has to be upgraded. Our CDMA technology allows us to push both voice and data over our (network). We can also increase the speed from its current 14.4 (kbps) to 56 (kbps) or higher speed levels. Once (that happens), you'll see a big burst of growth in usage because it becomes so much more practical when you add data



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> Jon Gelman **General Manager** Nextel Hawaii

moving applications. (Sprint Hawaii expects to offer PCS customers Internet services in late 1999.)

Besides data transmission, are there other ways telecoms can leverage their wireless asset?

We're going to come out with a new technology called ION. That enables residential users to do high speed data, Internet, video conferencing, faxing and telephone calls all at once, over a single telephone line. The advantage of being a wireless carrier is that there's a customer base that would be interested in other high technology products. Vice versa, people who are just high tech product users would also be interested in wireless products. That's the advantage that we see for us. Cross selling and complementing.

What other technological surprises will consumers begin to see from wireless technology?

With regards to data, they're going to be seeing a new product called third-generation phones. Third-generation phones are really what you need in order to get the applications for data (transmission). Are you familiar with Palm Pilots?

Hand-held personal organizers?

I just saw a phone that has a Palm Pilot built into it that we're going to be carrying at the end of this year. I talk to executives who complain about having a phone, a pager and a Palm Pilot. Imagine throwing all that away and just having one device that you can utilize. For high-tech inclined people who want the latest and the greatest, that would be a pretty hot product. You'll see things like that. But the third-generation phones are what you'll need in order to carry this high-speed data and accept high-speed data.

Do you think there'll come a time when hand-held wireless replaces land-based service overall nationwide or becomes the majority technology?

I think there's a possibility of that. I think you'll certainly see a trend towards that. Today though, there's still operational and systems issues that still need to be worked out. An example would be emergency 911 assistance. If you carry a wireless phone today and you call 911 they wouldn't know where to dispatch to. Those types of issues all need to be worked out. But I certainly see that the wireless piece that you carry today may replace the landline. What you may also see is a day when,

in order to get (phone service) to homes, you won't need copper wire. New subdivisions and hard to reach places will have local service through wireless. It's a lot cheaper to provide a wireless service versus digging in the ground and laying fiber optics.

Hazard a guess as to when wireless will become the majority technology.

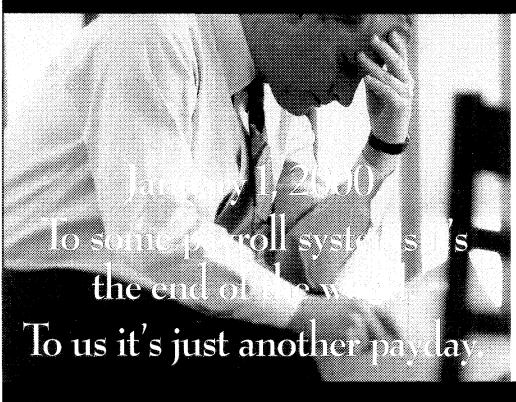
It's a matter of cost and payback. I'm not sure when it will happen.

If it does, do you think that Hawaii will again lead the way?

(Laughs.) If I have anything to do with...yes. But I think so, yes.

What kinds of bells and whistles do you have on your PCS phone?

I have a PCS phone that is voice activated. So when I'm driving down the road, I can just say, "Call my voice mail." And instead of having to touch dial, which is dangerous to do when you're driving...I can say, "Call home," or "Call the office," or "Call Gwen," my secretary. It has voice recognition. In addition to that, I have an accessory piece that acts as a microphone so you don't have to hold the handset up. I get to try all of the latest phones. (Laughs.)



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