

# **The Subcommittee on Communications**

**Tuesday, July 31, 2001**

## **Hearing on Spectrum Management and Third Generation Wireless Service**

**Testimony of Mr. Jay Kitchen, President and CEO  
Personal Communications Industry Association**

## **Introduction**

Chairman Inouye, Ranking Member Burns and Members of this distinguished committee, my name is Jay Kitchen and I am the President and CEO of the Personal Communications Industry Association (PCIA). PCIA is a wireless communications association dedicated to advancing seamless global communications through its strategic marketing, public policy expertise, events and educational programs. Our members include a broad base of interdependent mobile convergence players from all over the world. We are devoted to the rapid, efficient, and cost effective deployment of consumer-driven mobile products and services around the world. PCIA's Frequency Coordination and Microwave Clearinghouse divisions also give our association unique expertise in spectrum management services and have made us an industry leader in representing and serving the interests of tens of thousands of FCC licensees.

Chairman Inouye, I want to thank you for taking the time to hold this hearing and I applaud your leadership on this vital topic. Third generation wireless services (3G) will offer an array of exciting, rich content and valuable applications. Provision of high-speed, high-bandwidth third generation services will permit consumers to enjoy the full array of Internet capabilities on a wireless device while at the same time providing enhanced voice capabilities. To this end, the principal promise of 3G technology is that it will bring together the best of the Internet and the best of wireless services in a high-speed, effective, consumer-friendly fashion. In effect, this means access to mobile products and services as yet barely imaginable. For example, 3G technologies promise to increase the speed at which data travels over the air by 7 to 40 times and to allow transmittal of broad streams of data, enabling wireless handsets to act as "mini PCs," with full length e-mail and high-speed video capabilities.

In this testimony I provide information about the state of 3G developments in Asia and Western Europe and discuss the issues surrounding 3G development in the U.S. The arrival of 3G services in the U. S. is largely dependent on consumer demand and when the necessary spectrum needed to fully implement these services can be acquired. The incumbent user issues are well documented and there are many valid arguments being made in the debate over the appropriate spectrum for new 3G services. While spectrum is important, consumer demand is also a key component of the future of advanced mobile services like 3G. PCIA has partnered with several experts to benchmark and track those wants and needs. On one issue, however, there should be no debate. Our society will greatly benefit from the implementation of 3G services and until additional spectrum can be freed in a variety of ways, the move to a wider array of mobile products and services will be slow or relegated to limited geographic areas.

The debate over spectrum availability as we move to third generation wireless services has also laid bare the pitfalls of our country's present system of spectrum management. If an effort is not made now to resolve these issues under the leadership of you and Chairman Hollings, we will only face more difficulties down the road. We have an opportunity now to comprehensively address technical, economic and consumer issues in the context of advanced mobile services like 3G. We should act

upon it.

## **Global 3G Developments**

I just recently returned from an important PCIA membership meeting in London, where our discussions focused on the demand for and development of advanced mobile services around the world. Specifically we examined markets in Asia and Western Europe. Our experience in examining those markets is particularly germane to the theme of this hearing. We have discovered that although the migration towards full implementation of 3G services in the United States is moving slowly, there is still an opportunity for our country to show leadership in this very important economic area. Contrary to much of what has been said recently regarding 3G, our foreign counterparts are not as far along as some would have you believe. While it is a fact that most of Europe and Asia have already awarded 3G spectrum licenses, full-scale implementation of the actual services has not yet occurred and many of these license holders are facing substantial obstacles in building out their networks. It is important to point out that the majority of these licenses were awarded over a year ago and yet construction of the 3G networks has yet to begin in earnest.

In fact, Japan is currently the only country to actually offer any 3G service and this is on an introductory basis. This service, known as Freedom Of Mobile Multimedia Access (FOMA), was introduced in May 2001 by the Japanese wireless company NTT DoCoMo. Launched in the Tokyo area, this introductory service brings the capabilities of 3G to approximately 4,500 individual and corporate users. NTT DoCoMo had originally planned a nationwide rollout of the service, but it was postponed after the carrier experienced problems with the handsets they intended to use. NTT DoCoMo insists that it will roll out its nationwide network by October 2001, with full coverage not scheduled till spring 2002. However, they have experienced additional problems during the trial run with the handsets and capacity problems and so the Fall rollout date is uncertain. The Japanese, however, are confident in the future success of 3G and they are already making plans for that next generation. In June their Telecommunications Council, an advisory group to the Minister of the Ministry of Public Management, Home Affairs, Posts and Telecommunications announced a detailed plan for the fourth-generation mobile communications system that will succeed the IMT-2000, Japan's third generation service. According to this plan they intend to commercialize fourth-generation services by 2010.

In Europe things are progressing even more slowly. One of the main reasons is the cost the carriers paid for the spectrum. In Europe carriers spent over \$100 billion for their licenses. In Germany alone the auction for 3G licenses took in a total of \$46 billion dollars. In February of this year the Bank of England reported that over \$250 billion dollars had been borrowed by 3G licensees to pay for their authorizations and to begin network build out.

After spending so much to acquire their licenses, European carriers are now faced with huge debts. It is projected that as much as another \$100-\$150 billion dollars will be needed to build out their networks. Burdened with huge debts, limited capital to begin building their networks, and in some cases, credit ratings that have dropped from AA to A, some carriers have asked permission to share

the cost of building their networks and some have even asked for refunds. As of yet, no country has agreed to refund any of the proceeds and to date Germany is the only country that has agreed to allow for the sharing of the 3G infrastructure.

Another challenge our overseas counterparts are facing is the lack of availability of handsets capable of handling 3G. As I previously stated, handset problems were one of the main reasons that NTT DoCoMo cited for the delay in rolling out their 3G network this past May. In March NTT DoCoMo's president, Keiji Tachikawa, announced that out of 11 handset manufacturers with whom they had signed contracts to provide 3G products, only two were ready in May.

Although Japan is on its way to remedying its handset problems the situation in Europe is not as promising. In March the European Commission issued a warning that product development for 3G terminals had not progressed beyond prototyping. One of the main obstacles that needs to be resolved is the creation of a dual band phone that will enable seamless operations on both 3G and GSM. Currently European customers have the ability to "roam" anywhere a GSM network is in place. Until the 3G networks are built out as extensively as existing networks, customers will demand the ability to switch back and forth between the two bands. We believe that few European customers will be willing to purchase a service that is restricted to small areas, regardless of the upgrade, when they currently have a system that covers nearly the entire continent. Building this type of phone poses a significant challenge and, according to the European Commission, as of March, phones of this type were still in the design and early testing stage. In fact, it was reported just last week that Vodafone's 3G launch in the United Kingdom could be pushed back to 2003 due to a potential shortage of handsets. In time, handset manufacturers will overcome these technical problems but Europe's current situation dispels the belief that they are vastly ahead in the deployment of 3G services.

## **The United States**

In the United States several wireless carriers already have announced plans to rollout 3G services utilizing their existing spectrum. If their timetables hold true, we could expect the first 3G services to be launched in the U.S. by 2002. The introduction of these services will provide an important catalyst to prime the pump for 3G services. Many early adopters and higher-end business users will find the services invaluable and their experience will be used to generate greater demand. We applaud the efforts of companies such as Leap Wireless, Sprint PCS, AT&T Wireless and Nextwave who intend to launch these 3G services utilizing their current spectrum, while at the same time we believe 3G services should be available to all citizens -not just for select groups or geographic areas. The introduction and availability of those services will be limited. AT&T Wireless, for instance, has announced plans to roll out full 3G service in only approximately 70 of the top U.S. markets using its existing spectrum. In order for the full capabilities of 3G to be realized and, more importantly, to be equally available to every citizen in the United States, additional spectrum will be required.

Unfortunately, even under the best case scenario, it could take as long as 5-10 years before we have a fully constructed and ubiquitous 3G networks in the United States that meets the ultimate consumer

demands. Even if you could magically identify and allocate the needed spectrum today it would take a substantial amount of time to relocate incumbent users and free up that spectrum for 3G development. It would require additional time and resources to create an auction process, actually conduct the auctions, relocate the incumbents to new spectrum, replace their existing hardware, manufacture hardware for these new bands, and sell services to consumers on a large scale.

As an FCC authorized frequency coordinator and microwave clearinghouse, PCIA has extensive experience with spectrum management and planning and has, in coordination with the FCC, developed methods that help speed this process. When the FCC awarded the 1.9 GHz spectrum band to PCS operators, we played a pivotal role in helping to relocate the microwave incumbents. Based upon this experience, we know the challenges that will be faced in a relocation of this magnitude and understand that even if additional spectrum is awarded today it will take quite some time before the spectrum is cleared. Therefore, it is vital that we resolve our ongoing spectrum disputes as soon as possible. While we do not believe that our foreign counterparts currently have an insurmountable edge over us at this stage in implementing 3G services, if we do not act soon we will find ourselves at a distinct disadvantage with our global competitors.

### **Addressing the Issues Surrounding 3G**

3G services are as much a concept as they are a technological vision. In order to be successful you not only need technological know-how, but consumer demand for the services that the technology enables. The government has the responsibility to allocate resources to meet consumer demand, while industry has a responsibility to provide consumers with the services they desire. As you have observed many times Mr. Chairman, technology is wonderful and the devices technology creates can be a boon to business, lifestyles and social concerns. However, without consumer demand technology is worthless. Moreover, without products and services fueled by consumer demand there is no way to pay for technology.

In order to ensure that a sufficient amount of spectrum is available to offer advanced services it is vital that we develop a definitive national spectrum policy. We need to look to the future, decide where we want to be and formulate a plan that will get us there in a timely and orderly fashion. While spectrum auctions can net billions for the federal treasury, if we wish to continue to provide our citizens with access to the most recent technologies and keep our country on equal footing with our global counterparts, we can no longer afford to make spectrum decisions based solely on budgetary concerns. Creativity is also essential when developing national spectrum policy. Spectrum can be made available through multiple channels including refarming of existing spectrum, increasing the flexibility of use of existing allocations and the fungible trading of spectrum on the open market.

A national spectrum policy would allow our wireless companies to make long-range plans based on their spectrum requirements. Knowing what spectrum will be available and when should result in saving these companies millions of dollars, which they can ultimately pass along to their customers

through network improvements and cost savings. Under our present system, auction prices are driven to exorbitantly high levels because the demand for spectrum is great and there is no way to gauge when additional spectrum will become available. As a result you have situations like we saw in the C-block auction in 1995, where many top bidders overbid on the spectrum and wound up in bankruptcy. Europe is currently experiencing the same scenario, with many of the top spectrum bidders burdened with large amounts of debt.

A national spectrum policy would also allow us to harmonize our spectrum use with the rest of the world. This would allow for features such as global roaming and would create economies of scale for handset manufacturers who would be able to produce a single handset in the designated band, thus lowering costs for them and the consumer. In May PCIA had the pleasure of hosting Secretary-General Yoshiro Utsumi of the International Telecommunications Union (ITU). He echoed these sentiments in several Congressional visits. He repeatedly stressed the grave importance of global harmonization of 3G spectrum decisions. Mr. Utsumi expressed concern that if the United States did not use the same frequencies as the rest of the world, the consumer costs of handsets would remain unreasonably high. This could lead to broader economic ramifications, as well as limit the delivery of service to consumers worldwide.

Mr. Chairman, The U.S. still has opportunities to maintain its leadership in the global wireless marketplace. By creating a comprehensive spectrum policy that allows us to plan for the future, we can avoid the pitfalls that others and we are experiencing on our way to advanced mobile services. However, we need to acknowledge that the global marketplace is expanding and that in order to remain competitive, seamless global communications will be required. The only way this goal can be accomplished is if we harmonize the use of our spectrum with our foreign counterparts. In order to achieve this harmonization we need a definitive national spectrum policy.

Mr. Chairman, I want to thank you for allowing me to submit a statement on this vital issue. We are pleased you recognize the critical nature of spectrum matters and the global implications it has for U.S. companies and consumers. We must strive for a framework that gives all stakeholders the opportunity to craft products and services that can be delivered efficiently and effectively over the available radio spectrum. Swift resolution of this problem will require foresight and leadership and we are confident that you and Chairman Hollings will provide us with that. If the Subcommittee has any questions on this important issue, I am more than happy to respond. Thank you.