

No. 1, has he demonstrated excellence in the performance of his duties?

Two, has he demonstrated excellence in leadership and discipline?

Three, does he always set a good example?

Four, does he care for and respect the men and women who serve under him in the Navy?

Five, and above all, is he a man of integrity?

In my mind, Mr. President, Commander Stump's activities at Tailhook raise questions about his ability to exert moral leadership. I personally like the controversial "flagging" procedures. This procedure was instituted by the Armed Services Committee. It is a procedure for identifying the files of promotion candidates suspected of inappropriate behavior at Tailhook.

There is a good reason for doing this. The committee does not want to get bushwhacked on the floor by Senators like me, and other Senators, who may be waiting for an inappropriate person to be advanced to the floor for confirmation when they should not be that far along in the process anyway.

If we discover that a prospective nominee has engaged in misconduct at Tailhook, or anywhere else, they know that certain Senators on this floor, including myself, will raise questions and maybe hold it up.

Too many Navy nominees have slipped through the Senate confirmation net when damaging information about them lay hidden in Government files. It usually leaks out to the press after the fact. If that information had been exposed to public debate, some of the nominations would have died. "Flagging" helps to fix this problem.

Mr. President, the only way to solve the Navy's leadership problem is to promote men and women who measure up to a standard of excellence.

I think it is clear that the Senate Armed Services Committee has done the right thing in this particular nomination.

Mr. President, I yield the floor and suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. PRESSLER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

TELECOMMUNICATIONS

Mr. PRESSLER. Mr. President, the Telecommunications Act of 1996, which passed on February 1 and was signed into law February 8, is only the first step in my reform agenda for national telecommunications policy. As comprehensive as the new Telecommunications Act is, there are a number of profile and policy issues we were not able to adequately address, which need our attention.

Over the coming months, the Commerce Committee will be examining

the Federal Communication Commission's regulatory structure. The key issue is whether the FCC, a regulatory agency devised in the 1930's, based on the ICC model from the turn of the last century, makes sense today as we prepare for the 21st century. We also need to ensure that Federal regulation does not become a roadblock to the deregulatory policy changes engineered by the Congress with enactment of the Telecommunications Act of 1996.

We also will move forward with national spectrum policy reform. I plan to chair four Commerce Committee hearings on spectrum policy reform, covering a broad range of issues concerning the management of the electromagnetic radio frequency spectrum. Although the issue of the broadcast advanced television spectrum captured headlines, there are a number of spectrum policy reform issues we need to address that are far more important. I intend to move the spectrum policy debate firmly back on the ground to the communications policy rather than the budgetary process which, to date, unfortunately, has dictated the terms of the spectrum reform debate.

Mr. President, the electromagnetic radio frequency spectrum is an important physical phenomenon—a natural, national resource. An increasing number of telecommunications enterprises depend on access to this resource. These enterprises include radio and television broadcasting, communications satellites, the complex air-to-ground systems needed to manage aviation, the wireless systems upon which law enforcement and public safety depend, and the burgeoning mobile radio telephone business—cellular phones and personal communications services [PCS].

Simply put, the spectrum is to the information age what oil and steel were to the industrial age.

Today, there is a limited supply of available spectrum and an almost limitless demand for its use. In other words, the spectrum is an enormously valuable yet finite natural resource. This is the crux of the problem with our current spectrum policy structure. Unless a reformation plan is developed that will create a more effective and efficient use of the spectrum, as well as a more stable supply of spectrum for private sector use, a vast array of new spectrum-based products, services, and technologies will go unrealized for the American people.

This is particularly disheartening when one considers the benefits that are derived from current spectrum-based technology. For example, direct broadcast satellite [DBS] has become a viable competitor to cable. High powered DBS satellites have the ability to process and transmit as many as 216 video and audio channels simultaneously.

Cellular is another spectrum-based technology that is worth mentioning. In 1962, AT&T was operating its first experimental cellular telephone sys-

tem. It was not until 20 years later that the first cellular licenses were handed out. Today, the cellular industry generates about \$14.2 billion in revenues a year and provides service to nearly 35 million customers.

From its very beginning, wireless communication has played a vital role in protecting lives and property and, subsequently, through the development of radio and television broadcasting, in delivering information and entertainment programming to the public at large. More recently, wireless, spectrum-based telecommunications services, products and technologies have proven to be indispensable enablers and drivers of productivity and economic growth, as well as international competitiveness.

Wireless technology can deliver telecommunications and information services directly: First, to individuals on the move, away from the office desk or factory floor, thereby increasing their personal productivity; and second, to fixed locations that cannot be served economically by wireless facilities because of physical infeasibility or prohibitively high costs. Wireless services are also critically important in bringing competition to the wireline telephone network, one of the key goals of the Telecommunications Act.

The use of this economic resource is largely determined through administrative licensing procedures first developed in the 1920's. Compared to that of most other countries, the U.S. spectrum management system allows for a broad degree of private sector involvement in spectrum. Yet, the system still involves a large degree of central government planning by federal regulators.

To a large extent, it is electromagnetic industrial policy.

The FCC must determine which services should be provided, the frequencies on which they will be provided, the conditions under which they will be provided, and often the specific technology to be used.

As with other systems of central planning, the spectrum management system currently utilized in the U.S. tends to result in inefficient use of the spectrum resource. Federal regulators—rather than consumers—decide whether taxis, telephone service, broadcasters, or foresters are in greatest need of spectrum. It is a highly politicized process. Most importantly, new services, products and technologies are delayed or, worse yet, denied. This obviously harms consumers.

It typically takes years to get a new service approved by the FCC. The lengthy delay in making cellular telephone service available, noted earlier, imposed tremendous cost on the economy. One study estimated that the delay cost the economy \$86 billion. As important, American consumers were denied a new productivity and security tool for many years.

Equally troubling, the system constrains competition. One of the most

important determinants of a competitive industry is the ability of new firms to enter the business. The bureaucratic allocation process typically provides for a set number of licenses for each service, precluding additional competitors. Only two cellular franchises, for instance, are allowed in each market.

These problems have long been the focus of criticisms by economists and other expert analysts. Changes in new communications technologies, especially the digitization phenomenon, are making the system even more unworkable. New wireless communications technologies, services and products are being developed at an accelerated rate. Even if the FCC were able to weigh accurately the needs and merits of the relatively few spectrum-based services that existed in the 1930's, it is simply not able to do so today. Even if it could, the lengthy delays associated with the allocation and assignment processes, while perhaps acceptable in a slow changing world, are seriously out of step with the fast-changing world of today.

Pressures on the traditional radio frequency management structure are increasing. This is because demand for channels is outstripping supply. Some of the major issues which have arisen in recent years include:

GOVERNMENT USE

Many believe the Federal Government occupies too much of the radio spectrum resource today. They argue for reducing the government spectrum inventory in order to get this resource into the hands of the private sector where they believe it will be used more effectively and efficiently. Some also contend the traditional division of responsibilities between the FCC and NTIA is obsolete. Establishing a single radio spectrum manager for the United States, they argue, would be a significant improvement. Still others see the Government spectrum inventory as a potential source of revenues. They argue that the Government should be required to relinquish frequencies which could then be auctioned. They believe spectrum auctions would return billions of dollars to the Treasury.

SPECTRUM FLEXIBILITY

Many contend the Government should liberalize rules governing use of the spectrum. The prevailing radio frequency management system limits the uses that can be made of particular bands and channels. The channels allocated to broadcasting and assigned to broadcast stations thus cannot legally be used for cellular phone service today. Many of these frequency use limitations are grounded on traditional analog radio transmission technology. Many engineers and technical experts contend that the trend toward digital transmission renders these traditional limitations on channel use obsolete. Organizations including the Progress & Freedom Foundation have argued in favor of according frequency users broad flexibility to use their channels as they choose, subject to a no-inter-

ference requirement. Such a change would greatly empower individual licensees. It would also eliminate the scarcity of radio channels upon which much government regulation is now based.

SELF-MANAGED REGULATION

At present, the FCC controls which entities receive licenses and what they can do with them. Much of the radio frequency engineering associated with this regulatory system is conducted by the FCC in-house.

In some instances, the FCC has delegated some of its engineering and routine licensing functions to user cooperatives called frequency coordinator groups. Legislation passed by Congress in 1981 authorized this approach. Some believe the FCC should expand this approach to encompass virtually all radio-based communications. This would reduce the administrative burden on the agency, they maintain, while speeding up the overall process. Some have suggested that the FCC should make block grants of the spectrum to the States. Governors could then apportion channels among various State law enforcement, public service, and other users. This also would significantly reduce FCC costs, they argue, and could ensure more responsive frequency management.

The radio frequency management and use reforms outlined above hold significant promise. None represent a truly fundamental change in Federal policy. All would reduce regulatory burdens while fostering important public policies including advances in technology and innovation, greater choice and more customer options, and more effective, efficient, and responsive use of this resource.

A SPECTRUM POLICY REFORM PROPOSAL— GOVERNMENT USE

Several approaches have been advanced which, if adopted, would significantly improve the effectiveness and efficiency of Federal use of the radio frequency spectrum, and with no discernible adverse impact on the performance of the many Federal programs that now rely heavily on radiocommunications.

First, legislation should build on the 1993 Omnibus Budget Reconciliation law, which directed the Government within a specified period of time to relinquish control over a predetermined amount of radio frequency spectrum. This spectrum has been retroceded, in part, and should prove the basis for a variety of new private sector communications offerings.

Now, legislation requiring the Government to privatize a set percentage of its spectrum—20 to 25 percent—makes sense. A special temporary congressional commission could be established to carry out this task much like the Base Realignment and Closures Commission [BRAC]. Congress also has created special or temporary commissions in the past to examine problems like the 1981 temporary Commission on Alternative Financing for Public Telecommunications.

Mr. President, the proposal here is that there would be either the Base Closure Commission or something like it to look at the spectrum that the Defense Department and the CIA has to see if that could not be released in part or shared in part as new technology develops. Indeed, one of our hearings that we are going to hold in the Commerce Committee will be an off-the-record hearing on that subject. We certainly want our national defense to meet its requirements with spectrum, but we need to take a look at it. It may well take an extension of the Base Realignment and Closure Commission to look at the spectrum that the military has.

If enacted, this initiative would have several positive consequences. To begin with, it would give Federal agencies a powerful incentive to modernize their communications facilities—to derive more communications capacity from the same or less channel bandwidth. Reducing the amount of spectrum used by Government would also create a powerful economic engine that could help drive the deployment of common user wireless communications systems generally.

At present, there are a number of private sector alternatives to the Government providing its own radio communications. These include cellular radiotelephones as well as the new PCS services which are developing nationwide. As cellular radio moves from the conventional analog to more advanced digital transmission techniques, the number of cellular channels—system capacity—may increase by five- or six-fold.

That is important to repeat. As cellular radio moves from the conventional analog to more advanced digital transmission techniques, the number of cellular channels—system capacity—may increase by five- or six-fold. In other words, we may have five or six times as much capacity on some of the same spectrum. Do not let me overstate this matter because that is only true of certain types of spectrum. But we may have five or six times as much use of that same band of beachfront spectrum in some instances.

That large-capacity increase, plus the proliferation of additional wireless systems, hold the promise of significantly lower customer costs. Such costs could be even lower, if the volume of communications handled by these wireless systems grows. Here, as in other cases, cost per message, and thus price to users, is highly dependent upon volume.

Not all Government radio communications requirements can necessarily be fully satisfied by private-sector commercial mobile service [CMS] providers. Through the standard Government procurement process, however, agencies could negotiate with CMS providers for special services and capabilities. There is little reason to assume, at this time, that an effectively competitive wireless communications business could not adequately meet

many Government radio communications requirements. In the final analysis, the cost to the Government of relying on private sector supplies would be lower than the posted price because of the private sector's tax liabilities.

Second, legislation should be passed to consolidate U.S. frequency management responsibilities under the FCC. The current practice of splitting functions between the FCC and NTIA is a historical anachronism. The frequency management functions of NTIA, together with the IRAC Secretariat and associated support activities—including NTIA's electromagnetic compatibility analysis operations—should be transferred to the FCC. In order to take into account critical national defense, law enforcement, and security concerns, the law should provide for limited review of FCC decisions on Federal frequency management by the President or his designee. At present, NTIA frequency allocation decisions are reviewable by the Director of the Office of Management and Budget, acting pursuant to delegation from the President. No appeal from an NTIA frequency decision apparently has ever been taken.

Such a consolidation makes sense. The FCC's engineering and routine radio frequency management chores can, for the most part, be assumed by private sector frequency coordinator groups. As Government users increasingly rely on the private sector to meet communications needs, and the dimensions of the Government change as well, the NTIA workload is likely to shrink as well. It makes little sense for taxpayers to fund two separate, Federal agencies both responsible for the effective and efficient use of the same resource.

SPECTRUM FLEXIBILITY

Radio frequency management traditionally has limited the permissible uses of allocated bands and assigned channels. This, in part, has been a function of technology, as well as the technical characteristics associated with particular frequencies.

For example, channels allocated to the Forest Products Service have traditionally been quite low frequencies, because those frequencies have been shown to have the greatest ability to penetrate underbrush, leaves, etc. In general, the higher the frequency range, the more the transmission resembles visible light in terms of the phenomena that cause interference. Hence, at very high frequency ranges, fog, air pollution, and rain cause interference which would not arise if lower frequencies were used. New digital communications technologies, however, lessen this challenge. This is because digital technology includes error correction and other features which lessen interference.

"Spread spectrum" and "digital overlay" techniques make it possible for multiple communications pathways to be established within the same radio frequency channel. Using this tech-

nology, broadcasters could transmit other communications in addition to video and sound signals. Radio broadcast channels today already are providing local links for paging operations.

Government policy should encourage multiple, more intensive use of radio frequency resources where there is no perceptible adverse technical impact. Among other things, allowing radio frequency licensees greater flexibility could facilitate equipment and systems modernization and upgrading. For example, many public safety communications systems today are in need of modernization, to meet the demand for more cost-effective and responsive law enforcement, fire safety, and emergency medical services. The financial resources available to many public safety communications organizations are limited today, however, as a consequence of the fiscal austerity imperatives arising at virtually all levels of government.

If local police forces were permitted greater flexibility in use of their channels, however, this challenge would be less severe. Switching to new digital communications techniques typically achieves a significant increase in the total number of channels available—in some cases, by a factor of four or more. A local police department, therefore, could increase the number of channels available to support its operations and, at the same time, have capacity available which it could lease or barter with private communications organizations. Such arrangements could generate the funds needed to finance modernization. Greater flexibility is a public interest win-win situation—an option that benefits all involved and affords the general public both better service and more communications options.

The FCC and NTIA have already taken steps to allow some radio licensees more flexible use. The FCC's cellular radiotelephone rules, for example, place few constraints on permissible communications. The same is true in the case of the new PCS services. What is needed, however, is far greater application of this fundamental principle of flexible spectrum use.

SELF-MANAGED REGULATION

One of the more promising options for radio frequency management reform is expanded use of self-managed regulation—the use of private sector radio frequency coordinator groups to handle routine engineering, frequency coordination, and other functions which, in the past, had typically been undertaken by FCC staff.

At present, the FCC relies on frequency coordinators to handle many of the routine chores associated with private mobile radio systems. Organizations such as the National Association of Business & Educational Radio [NABER], the Associated Public-Safety Communications Officers [APCO], and the Special Industrial Radio Service Association [SIRSA] process applications, conduct engineering surveys, and otherwise facilitate licensing and chan-

nel usage in these specific private radio services. The FCC does not generally rely on frequency coordinators, however, with regard to broadcast services, satellite communications, and other large frequency-using services.

The task of being a frequency coordinator depends, in large part, upon access to computerized data bases, and having some radio frequency engineering expertise. Access to data bases today, of course, is routine. The number of individuals with substantial radio frequency management expertise is growing, moreover, in part because of Federal Government, and Defense Agency, downsizing. There is, in short, no good reason to assume that multiple frequency coordinators could not be sanctioned by the FCC. This would have the effect of broadening user's options. Competition among and between frequency coordinator groups, moreover, should have the effect of ensuring efficient charges and effective, responsive operations. That has been true in virtually every market where competition has been introduced, and should prove true in this case as well. The FCC should be directed to expand substantially the Agency's use of private sector frequency coordinator groups.

Let me say something about the public safety spectrum and begin to conclude by saying, at this time, the FCC should be directed to assess the feasibility and desirability of making some spectrum block grants to States. In lieu of processing, issuing, and renewing tens of thousands of public safety communications licenses—at significant cost to licensees, as well as the FCC—the agency would issue 55 block grants to the chief executive officer of each State, including Guam, Puerto Rico, the U.S. Virgin Islands, and the District of Columbia. It would then be the responsibility of State Governors to determine eligibility, to ensure compliance with standard FCC—and other—operating rules, and to resolve disputes among public safety licensees within the jurisdiction.

This would reduce delays and heighten responsiveness to actual user requirements, while also lessening substantially the burdens of traditional regulation now borne by the FCC. Most importantly, it would tend to ensure more and better public safety communications for State residents. Again, while States today have substantial radio frequency engineering expertise, such expertise is readily available in the competitive marketplace.

In conclusion, the radio frequency management and use reforms outlined above hold significant promise. All would reduce regulatory burdens while fostering important public policies including advances in technology and innovation, greater choice and more customer options, and more effective, efficient, and responsive use of this valuable national resource. I look forward to receiving comment on these and other spectrum reform proposals as part of our comprehensive hearing process in the Commerce Committee.

Mr. President, as I look about the Chamber and in the galleries, I feel as I did some months ago. I addressed our State Chamber of Commerce. I was our last speaker after a whole series of speakers. Toward the end of my speech I noticed everyone was nodding their heads. Either they agreed with me or they were falling asleep.

I thank my colleagues for letting me make this speech on spectrum management policy. Some of my basic thinking is we need to take a new look at this spectrum. It is a national natural resource. We need to look at what the Government has and what private areas have. We need to look at what the broadcasters have; if they are going to migrate, if we are sure we are going to auction what they migrate from.

We have to look at giving authority to the States. If we find that there is more spectrum to use, we need to consider the possibility of auctioning it or, if it is used for public use, letting some of the State Governors decide how to

allocate it rather than have it be allocated here within the beltway.

Those are some things we need to think about.

ORDERS FOR THURSDAY, MARCH
14, 1996

Mr. PRESSLER. Mr. President, I ask unanimous consent that when the Senate completes its business today, it stand in recess until the hour of 9:30 a.m. on Thursday, March 14; that immediately following the prayer, the Journal of proceedings be deemed approved to date, the time for the two leaders be reserved, and the Senate then resume the omnibus appropriations bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. PRESSLER. Mr. President, I further ask unanimous consent that, at the hour of 1:30 p.m. on Thursday, the Senate lay aside the pending business and there be 30 minutes for debate prior to the Whitewater cloture vote, to be equally divided in the usual form.

The PRESIDING OFFICER. Without objection, it is so ordered.

PROGRAM

Mr. PRESSLER. For the information of all Senators, the Senate will resume the pending omnibus appropriations bill at 9:30 a.m. Thursday. A number of amendments are remaining, therefore votes will occur. Also, a cloture vote will occur at 2 p.m. with respect to the Special Committee To Investigate Whitewater.

RECESS UNTIL 9:30 A.M.
TOMORROW

Mr. PRESSLER. Mr. President, if there is no further business to come before the Senate, I now ask unanimous consent that the Senate stand in recess under the previous order.

There being no objection, the Senate, at 8:45 p.m., recessed until Thursday, March 14, 1996, at 9:30 a.m.