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S. HRG. 106–513

S. 800, WIRELESS COMMUNICATIONS AND PUBLIC SAFETY ACT OF 1999

HEARING

BEFORE THE

SUBCOMMITTEE ON COMMUNICATIONS

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION UNITED STATES SENATE

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

MAY 12, 1999

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED SIXTH CONGRESS

FIRST SESSION

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S.800, WIRELESS COMMUNICATIONS AND PUBLIC SAFETY ACT OF 1999

WEDNESDAY, MAY 12, 1999

U.S. SENATE,
COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION
SUBCOMMITTEE ON COMMUNICATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 9:45 a.m., in room SR–253, Russell Senate Office Building, Hon. Conrad Burns (chairman of the subcommittee) presiding.

Staff members assigned to this hearing: Maureen McLaughlin, Republican counsel; and Paula Ford, Democratic senior counsel.

STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

Senator BURNS. We will call the committee to order and I will turn on my outfit here.

Thank you for coming this morning.

Let me first apologize. Traffic out there—I do not know how we handle this. I just made a suggestion to Senator Wyden that I know how to take care of the traffic problem in Washington, D.C.: Pass a law that you cannot drive a car until you have it paid for. [Laughter.]

Senator BURNS. I think we could get around pretty good under those conditions.

Thank you this morning and our witnesses beforehand, as we look into this issue. We often deal with critical issues, as you know in this subcommittee, but today's hearing is on a topic that literally can be the difference between life and death. That's what we call E9–1–1.

Over 70 million Americans carry wireless telephones. Many carry them for safety reasons. People count on those phones to be their lifelines in emergencies. In fact, 98,000 people are counting on their wireless phones in emergencies today. A parent driving down an interstate highway with babies in the back seat draws comfort from knowing that, if the car is involved in an accident, he or she can call 9–1–1 for help or an ambulance, and an ambulance will be rolling and will be there in seconds. An older American, driving alone on a long trip, feels safer knowing that also if an accident occurs or sudden illness strikes, he or she can use the wireless phone to dial 9–1–1 for help and the State police will be on their way.

But there's a problem. In many parts of our country, when the frantic parent or the suddenly disabled older person punches

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9–1–1 on a wireless phone, nothing happens. In those locations, 9–1–1 is not an emergency number. The ambulance or the law enforcement agencies will not be coming. You may be facing a terrible emergency, but you are on your own because you do not know the local number to call for those emergency services.

The E9–1–1 Act of 1999 will help fix that problem by making 9–1–1 the number to call in an emergency anytime anywhere. The rule in America ought to be uniform and it should be simple: If you have an emergency, wherever you are, the number is 9–1–1. I think in most areas where 9–1–1 has been designated the emergency number, the success across the country has been really good.

More and more wireless communications is a critical link that can help get emergency medical care to those in their golden hour when timely care can mean the difference between life and death. The 9–1–1 bill will save lives by doing three things.

First, it directs the FCC to designate 9–1–1 as the universal emergency telephone number. The FCC also would provide technical support to the States to help implement a comprehensive, end-to-end emergency communications infrastructure.

Second, the bill establishes similar treatment between the wireless and wireline communications industries in protection from liability for the provision of telephone services and in the use of 9–1–1 service. The bill gives wireless providers of telephone service the same protection from liability as local exchange companies receive in handling emergency calls. This will help put wireless and wireline carriers on an equal footing when it comes to legal liability, ensuring that the new technologies have similar protections as our older ones. It is a matter of fairness. It also ensures that the public safety answering points to handle 9–1–1 calls have the same protections from liability in handling wireless calls as they have with wireline calls. This too is a matter of fairness, as we will soon hear from Mark Wildey. Mark is an emergency 9–1–1 dispatch official from Littleton, Colorado, site of the tragic shooting at the Columbine High School that left 15 dead and 23 others injured. Mark will share his firsthand knowledge of how the students and others under siege relied on their mobile phones to call for help.

Third and last, the bill authorizes disclosure of call location information concerning the user of a commercial mobile service in three circumstances. The communications carrier can disclose location information if the customer authorizes this disclosure, or the information is transmitted as a part of an automatic crash notification system, or if the disclosure is made to emergency response personnel to enable them to respond to an emergency call from the user.

Now, I want to say something about what this bill does not do. Members of the subcommittee will note that this bill, unlike its predecessor, S. 2519 in the last Congress, does not address the questions of siting of wireless antennas on Federal property, research and development on automatic crash notification systems. The provisions in last year's bill regarding siting of wireless antennas on Federal property drew concerns from representatives of States and localities. They feared that the provision might somehow alter the delicate balance on State and local zoning authority that was struck in the telecommunications legislation enacted in

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1993 and also in 1996. It is not our intention, nor is it now, to change that delicate balance, and to avoid the risk of any misperception on that score, this bill does not include the provision regarding siting of wireless antennas on Federal agencies.

This year's 9–1–1 bill is simple. It makes 9–1–1 the universal emergency number, provides for equal protection on wireless and wireline carriers, and authorizes disclosure of the location of the emergency callers. I think it will help save lives and it is supported by a broad range of public safety, emergency medical, consumer and citizen groups. This is to facilitate what we call first responders. These groups represent the operators and users of the 9–1–1 system, those with direct experience with the problems of today's system.

We look forward to hearing from today's witnesses on this important legislation.

Now it is my pleasure to recognize Senator Wyden from Oregon who has been a very, very active member of the Communications Subcommittee. We have worked together on many important issues, and I certainly appreciate his input and his cooperation. Thank you for coming this morning.

[The prepared statement of Senator Burns follows:]

PREPARED STATEMENT OF HON. CONRAD BURNS, U.S. SENATOR FROM MONTANA

We often deal with critical issues in this Subcommittee, but today's hearing is on a topic that literally can mean the difference between life or death: E9–1–1.

Over seventy million Americans carry wireless telephones. Many carry them for safety reasons. People count on those phones to be their lifelines in emergencies. In fact, 98,000 people are counting on their wireless phones in emergencies everyday. That is how many wireless 9–1–1 calls are made a day, 98,000. A parent driving down an interstate highway with the babies in the back seat draws comfort from knowing that, if the car is involved in a crash, he or she can call 9–1–1 for help and an ambulance will be rolling in seconds. An older American driving alone on a long trip feels safer knowing that, if an accident occurs or sudden illness strikes, he or she can use the wireless phone to dial 9–1–1 for help and the State police will be on the way.

But there's a problem. In many parts of our country, when the frantic parent or the suddenly disabled older person punches 9–1–1 on the wireless phone, nothing happens. In those locations, 9–1–1 is not the emergency number. The ambulance and the police won't be coming. You may be facing a terrible emergency, but you're on your own, because you don't know the local number to call for emergencies.

"The E–911 Act of 1999" will help fix that problem by making 9–1–1 the number to call in an emergency—anytime, everywhere. The rule in America ought to be uniform and simple—if you have an emergency, wherever you are, dial 9–1–1.

More and more, wireless communications is the critical link that can help get emergency medical care to those in the "golden hour" when timely care can mean the difference between life and death. The 9–1–1 bill will save lives by doing three things.

First, it directs the Federal Communications Commission to designate 9–1–1 as the universal emergency telephone number. The FCC also would provide technical support to the States to help them implement a comprehensive, end-to-end emergency communications infrastructure.

Second, the bill establishes similar treatment between the wireless and wireline communications industries in protection from liability for the provision of telephone services and in the use of 9–1–1 service. The bill gives wireless providers of telephone service the same protection from liability as local exchange companies receive in handling emergency calls. This will help put wireless and wireline carriers on equal footing when it comes to legal liability, ensuring that our new technologies have similar protection as our older ones. It's a matter of fairness. It also ensures that the Public Safety Answering Points that handle 9–1–1 calls have the same protections from liability in handling wireless calls as they have with wireline calls. This too is a matter of fairness as we will soon hear from Mark Wildey. Mark is

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an emergency 911 dispatch official from Littleton, Colorado, site of the tragic shooting at Columbine High School that left 15 dead and 23 injured. Mark will share his first hand knowledge of how the students and others under siege relied on their mobile phones to call for help.

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This year's 9–1–1 bill is simple—it makes 9–1–1 the universal emergency number, provides for equal protection of wireless and wireline carriers, and authorizes disclosure of the location of emergency callers. This bill will help save lives and is supported by a broad range of public safety, emergency medical, consumer and citizen groups. These groups represent the operators and users of the 9–1–1 system, those with direct experience with the problems with today's system. We look forward to hearing from today's witnesses on this important legislation.

STATEMENT OF HON. RON WYDEN, U.S. SENATOR FROM OREGON

Senator WYDEN. Thank you, Mr. Chairman. Mr. Chairman, let me commend you for your leadership. I am very, very pleased that you have moved so quickly to bring this issue before the subcommittee, and I am proud to be a cosponsor of the legislation. I have had a chance to work closely with you and the bipartisan staff on it.

Mr. Chairman, it seems to me that this legislation stands for a simple proposition, and that is that in every community in our country, when an emergency strikes, it ought to be possible for a citizen to get 9–1–1 emergency service without having to go through bureaucratic water torture. When citizens are faced with these emergencies, they should not have to wade through the Yellow Pages to find a phone number. They ought to be able to get their call through immediately, and they should not have to prove that they are a customer or give an operator a zillion-digit access code. It ought to be possible for folks to dial the same three digits everywhere in this country to get help.

Mr. Chairman, I would just ask that we put into the record an article from the Washington Post this morning that is headlined: Response in Littleton was Swift, but unsure; Communications Woes Hindered Police. I am looking forward to the witness that you have arranged. This will allow us to get more of the details on it. But this article notes that "of the county's 32 emergency 911 channels, 15 were jammed with calls about the shootings." Matthew Depew, 16, was hiding in a room off the cafeteria. He was talking on a cell phone for 2 hours with police officers. Another one of the students, Ben Lausten, was in one of the choir rooms. He was over

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there for about 3 hours and on the phone with the police. So, we have a concrete case of why this legislation is so important.

[The Washington Post article follows:]

THE WASHINGTON POST

May 12, 1999

HEADLINE: Response In Littleton Was Swift, But Unsure; Communications Woes Hindered Police

When two teenage gunmen tore through Columbine High School on a shooting rampage last month, police officers from across the Denver area descended swiftly on the scene. But the extraordinary law enforcement response was hampered by the simplest of problems—they could not communicate with each other.

Decisions made at a hastily assembled command post had excruciating consequences. Following instructions, police moved methodically through the building, evacuating students instead of racing through the corridors in search of the gunmen. But that meant that hours would pass before SWAT teams reached a critically wounded teacher on the second floor.

Serious questions remain about whether police made errors in judgment that day, when 15 people died at the hands of Eric Harris and Dylan Klebold, including the shooters themselves. But dozens of interviews with officers and others on the scene make it clear that police faced a range of critical problems, from the lack of a common radio channel to the quandary of how to handle hundreds of terrified students.

The massacre at Columbine is quickly becoming a case study for SWAT teams across the country, parsed minute by minute, critiqued in tortuous detail—all that went wrong and right during the grueling police rescue mission.

At a time when hundreds of American cities have assembled rapid-response SWAT teams, Columbine is a vivid reminder of difficult, enduring law enforcement dilemmas. How fast should police move when faced with rampaging shooters? Should the primary goal be rescuing victims or eliminating the threat? When can caution cost lives?

For law enforcement officials, deconstructing the decisions of that day is critical for the future. The Littleton tragedy will not be the country's last school shooting, experts warn. But it represents a test no police force has ever faced: bombs exploding as unknown gunmen shot their way through a building crowded with nearly 2,000 panicking students and teachers.

The images of April 20 are still fresh: Scores of police officers milling around outside the school building, even as an ominous sign hangs in an upstairs window: Ili bleeding to death." Students pressing their shirts against a teacher's wounds for hours, showing him photos from his wallet to keep him alive.

BEYOND THE WORST CASE

"This is beyond the worst-case scenario they train for. . . the unthinkable," said Larry Glick, chairman of the National Tactical Officers Association.

Glick's organization is already recommending that SWAT teams train for potential crises in the schools. The group will also disseminate to other SWAT teams "a lot of lessons learned out of Columbine, when the official report compiled by Jefferson County authorities is complete, he said.

Part of the goal in the reviews will be to answer criticism that it took far too long to reach critically wounded teacher Dave Sanders, particularly given police accounts that the shooting was over in 45 minutes or less.

Others have asked why SWAT teams inside the building were not told about Sanders's plight, despite telephone calls from a student in the science room and the window sign warning that someone was perilously wounded. Lakewood police said when they saw the sign they asked to go in to rescue the victim, but were told by the commander in charge that two other police departments were already in that part of the building.

Finally, why didn't police simply storm through the building until they found Harris and Klebold?

While police were hampered by numerous problems, a slow initial response was not among them.

Neil Gardner, a Jefferson County deputy assigned to the school was patrolling nearby when a custodian called him at 11:25 a.m. to report explosions and shootings. Three minutes later, Gardner was exchanging gunfire with Harris and Klebold near a building entrance beside the library. The teenagers had come across the soccer field and opened fire in the parking lot.

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Gardner radioed for help at 11:29 a.m. and within minutes, seven county deputies had arrived and were rescuing injured students from the parking lot.

For Lt. Terry Manwaring, Jefferson County's SWAT commander, the day was jolting trip from the sublime to the unthinkable.

When he got the call he was patrolling Tiny Town, a child's fantasy park of miniature buildings nestled in the Rocky Mountain foothills. He raced—speeding at more than 100 mph down the curving mountain road—to an altered world of children, a school under siege.

He arrived at Columbine at 11:38 a.m. to find pandemonium. Traumatized people were fleeing the building. Klebold and Harris were firing shots inside, tossing homemade bombs and shooting at officers in the parking lot.

The Jefferson County Sheriff's Department quickly established a "command post," a police bus parked a half block from the school, where Lt. David C. Walcher would spend the next several hours giving orders to SWAT team leaders from other police departments.

Meanwhile, Manwaring, who was desperate to get inside the building, patched together a makeshift police team from Jefferson County, Denver and Littleton.

His team, he said, was "a pretty ragtag SWAT outfit." Most officers had no gear and were forced to share guns and vests. Eleven men shared one protective shield.

Pulling on his bulletproof vest, Manwaring asked four adolescent boys if they knew the building's floor plan, then ran to his car for paper and pen. They sketched out a maze of doors and hallways. At roughly 11:51 a.m., guided by this crude blueprint, Manwaring entered a war zone.

He carried something else too, a haunting image of a pair of hands he had seen pressed against a classroom window.

The decision by Jefferson County law enforcement officials to send in police from numerous jurisdictions, however necessary, introduced one of the day's most critical challenges—the lack of a common radio channel police could use to talk to one another.

Eight tactical teams were formed from five jurisdictions. But officers in and around the building could not communicate where they were or what they were finding.

Information that reached the early SWAT officers was conflicting. They were told at one point that they should be looking for more than two shooters and perhaps as many as six. The suspects, they were told, might have changed clothes to blend in with fleeing students.

Adding to the confusion, scores of students and teachers trapped inside were using countless cellular telephones, school telephones and even computer messages to alert police and family about where they were hiding and where police could find the suspects. Of the county's 32 emergency 911 channels, 15 were jammed with calls about the shootings.

Matthew Depew, 16, who was hiding in a room off the cafeteria, talked by cell phone to a police officer for two hours. Ben Lausten, one of 60 students huddled near the choir rooms for more than three hours, also spent much of that time on the phone with police. And Aaron Hancey, a Columbine junior who tried to stop Sanders' bleeding, was on the telephone with his father who in turn had called paramedics and was relaying instructions back to Hancey.

Crucial information coming out of the building, however, was not reaching the officers inside.

Manwaring and Denver Police Capt. Vince DiManna, who was also part of the first SWAT team, said they were never told that a teacher was gravely wounded upstairs.

THEORY, REALITY COLLIDE

In theory, throwing together a makeshift SWAT team is a "horrible idea," said Victor Keppeler, a police studies professor at Eastern Kentucky University.

Officers who have not worked together, he said, cannot anticipate each other's moves or communicate with practiced hand signals and gestures.

"They never should, in my opinion, allow officers that didn't train together to work in a team," Keppeler said.

But police commander Joe Pelle, who was at Columbine as head of the Boulder SWAT team, argues that textbook rules did not apply.

Forming an emergency team, he said, "is an extremely risky thing to do. You're basically deciding somebody on your team is likely to get shot. . . . In most situations you wouldn't do that. However, when you have evil people killing children, all the other stuff goes out the window. Somebody has to get in there and stop it."

That was Manwaring's goal.

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Once inside the building, the officers found themselves in an unimaginable environment—blaring fire alarms, glaring security strobe lights, halls filled with water from the sprinkler system.

"All this time, you're trying not to get shot," Manwaring said. "We have no idea where the shooters are. Every time we rounded a corner, we didn't know whether it was a good guy or a bad guy. . . . I didn't know how sophisticated they were. I just knew they were armed and were better equipped than we were."

He tried to pinpoint the location of gunfire and detonating bombs, but found it impossible.

"We were getting all sorts of information from outside," he said. "Two to six shooters. They're in this part of the building; no, they're in this part. Seventeen hostages on the east side. You have kids inside, you have kids outside. A shooter here, a shooter there. Both shooters down. We had kids calling us from the attic. Calls were coming from the auditorium, the business office and the math room. Where the hell's the math room?

Manwaring's roughly drawn floor plan did not suffice to guide officers through the modern, expansive structure of 80 classrooms. They relied on radio instructions from supervisors at the command post to find their way,

The commanders, in turn, relied on Columbine Principal Frank DeAngelis, who was huddled there with them, sketching the school layout with a marker on a white erasable board.

METHODICAL—AND SLOW

A second SWAT team entered the building shortly after noon. At 12:20 p.m., police put out a call for more ammunition. After 1 p.m., a third SWAT team went in. Eventually, more than 50 officers would be inside the building.

Police movement through the school was excruciatingly slow. Behind virtually every classroom door and in every office, police found pockets of students and teachers, hiding, sometimes begging for help. Not knowing if any of these students could be the suspects, police searched them, then escorted them, hands up, out of the building.

Among police experts, the wisdom of a methodical approach is a point of debate. Why didn't the police send some officers to find the shooters?

The answer lies in a standard SWAT approach, which emphasizes team safety and, in this situation, would view all students as potential suspects.

Jessica Arzola, who hid for more than three hours in a second-floor closet, said when the SWAT team found them, the students were ordered to lie on the floor with their hands behind their heads. She said she was frisked four times before leaving the building.

"Every wall we got to, they frisked us," Arzola said.

Like many smaller jurisdictions, Jefferson County and other Denver suburbs maintain part-time SWAT teams, made up of officers who spend the bulk of their days as detectives or on street patrol. The SWAT concept—"special weapons and tactics" —has grown increasingly popular, with the number growing to at least 4,500 nationwide.

But in many jurisdictions, training is usually limited to drug busts and hostage scenarios, situations that pale beside the events in Littleton.

CLEARER COMMUNICATIONS

Littleton Fire Chief William L. Pessemier, who headed emergency rescue teams on the scene, urged visiting Attorney General Janet Reno to view Columbine as a wake-up call for a more thorough police and fire training that crosses geographic barriers.

The day of the shootings, Pessemier said, paramedics from 10 jurisdictions were talking with each other through a common emergency network, but they could not communicate with police.

"We needed to know where SWAT teams were bringing the victims out of the building to arrange for our people to meet them," he said, describing how his teams rescued three victims by moving in close to the school, without helmets or bullet-proof vests, as Harris and Klebold fired from a library window.

Ultimately, Pessemier solved the problem by working out of the police command post and, like the SWAT team leaders from various jurisdictions, relaying information to his own team by radio.

While fire officials have engineered a common radio channel among jurisdictions, the lack of one for police has been a recurring obstacle in major disasters, including the 1995 Oklahoma City bombing.

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"It's been a problem. It was a problem at Columbine. And it will continue to be a problem" until SWAT teams standardize their equipment, said Glick.

Most of the officers on hand that day argue that the police response should not be criticized, that standard police practice has to be reinvented on the fly in extraordinary circumstances.

Nevertheless, the Columbine chronology is stark:

Police say the shots fired by the killers ended before noon that day.

It was 3 p.m. when SWAT officers found Dave Sanders.

At 3:30 p.m., police found 12 dead in the library, including Harris and Klebold.

An hour later, at 4:30 p.m., SWAT teams declared the school safe.

Thompson reported from Littleton. Ottaway and Vobejda reported from Washington. Researcher Alice Crites contributed to this report.

ATTACK AND RESPONSE

Soon after the first reports of gunshots were called in to the Jefferson County sheriff's office, a massive contingent of law enforcement officers arrived at Columbine High School. SWAT teams proceeded with a room-by-room search, a process that has been criticized as too slow. SWAT teams declared the school safe at 4:30 p.m., five hours after the first reports of trouble.

THE ATTACK AND RESPONSE

1. 11:25 a.m.: Cafeteria worker Karen Nielson calls 911 to report gunfire. Officer Neil Gardner called by custodian about explosions and shooting.

2. 11:28 a.m.: Upon Gardner's arrival, he engages in a shootout with one gunman outside southwest doors. He radios for backup. Dispatcher reports girl "down" in parking lot. She is later found dead. Two other officers arrive within minutes.

* Bombs are going off. Shooting begins out of library window.

* Gunman returns to southwest door and exchanges gunfire with officers in parking lot.

3. 11:46 a.m.: Police use fire truck as shield to rescue students outside door near library.

4. 11:51 a.m.: Makeshift six-member SWAT team enters school amid reports of rapid gunfire and fires inside.

* Noon: Medical triage set up and first group of injured sent to hospitals.

5. 12:15 p.m.: After removing one dead and two wounded students, Capt. Vince DiManna takes five other SWAT team members into school.

6. 1–1:30 p.m.: Authorities report finding pipe bombs. Third SWAT team enters school through teacher lounge, frees worker and students from cafeteria.

7. 2:00 p.m.: Students in Dave Sanders's room are told that SWAT team is six classrooms away.

8. 2:30 p.m.: Patrick Ireland drops out of second story library window and is caught by two Lakewood SWAT officers.

9. 3:15–3:30 p.m.: SWAT team evacuates students from science room, leaving Sanders. Paramedic arrives, concludes Sanders is near death and leaves in search of others injured.

10. 3:30 p.m.: Police find 12 dead in the library, including the two suspects.

* 4:30 p.m.: SWAT teams declare school safe. School fire alarms still blaring

11. 6:15 p.m.: Bombs found in three cars in parking lot.

SOURCES: Staff and wire reports Columbine High School students run out of school during April 20 rampage in which 15 people were killed, including the two shooters.

Senator WYDEN. I share your view that we are going to have to work closely with the various folks on these liability issues, and I think we have done that in fashioning this bipartisan legislation.

But what is important here is that no matter where our citizens are, no matter what kind of phone they are using, no matter what kind of service they subscribe to, they would be in a position to get help. I look forward to pursuing this with you as we have done on so many occasions this year.

Senator BURNS. Thank you very much, Senator Wyden.

We would like to have our panelists come to the table, if they would. We have Mr. George Heinrichs, President and CEO of SCC Communications Corporation of Boulder, Colorado; Thomas Wheeler, Cellular Telecommunications Industry Association from herein

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town; and of course, the Director of Communications Technologies for West Metro Fire Protection District, Mark Wildey, from Lakewood, Colorado. We appreciate you gentlemen sharing your experiences and your views on this piece of legislation, and I would start off with Mr. Heinrichs. Thank you for coming and welcome.

STATEMENT OF GEORGE HEINRICHS, PRESIDENT AND CEO, SCC COMMUNICATIONS CORPORATION, BOULDER, COLORADO

Mr. HEINRICHS. Thank you. Good morning, Chairman Burns and members of the subcommittee. I am George Heinrichs, President and CEO of SCC Communications of Boulder, Colorado. I appreciate the opportunity to testify in favor of the Wireless Communications and Public Safety Act of 1999, S. 800.

After spending more than 10 years in public safety and law enforcement, I decided to start my own company. In 1979 I co-founded SCC which is now the largest and fastest growing 9–1–1 services and technology company in North America. We have expanded from a two-person startup to a publicly traded company employing 300 people. SCC provides products and services for approximately 30 wireless and wireline carriers and their customers throughout the United States.

For years I have played a role in the implementation of wireline enhanced 9–1–1 and have directly witnessed situations where it made the difference between life and death. While enhanced 9–1–1, or E9–1–1 for short, is now commonplace on the wireline side, it is still in its infancy on the wireless side. As many people have pointed out, when a person dials 9–1–1 from his wireline phone, the emergency call taker or dispatcher receives data showing both the phone number and address where the call was placed. This is what enhanced 9–1–1 is: information identifying the emergency caller's number and location that is transmitted to public safety personnel instantaneously, information that saves lives.

Right now, E9–1–1 is not deployed for most wireless callers. Today, when that same caller dials 9–1–1 on his wireless phone, the emergency operator receives no identifying information such as call-back number or location. In fact, wireless emergency calls are often routed to the wrong jurisdiction. Even when the wireless 9–1–1 call goes to the right place, if there is a disruption in service or if the caller hangs up, the emergency dispatcher has no way of reconnecting with that caller. Implementing wireless E9–1–1 will correct this problem.

Industry estimates put the wireless 9–1–1 call volume at 98,000 calls per day across the U.S. Public safety answering points around the country report that between 25 and 33 percent of the calls they receive originate from wireless phones, and these numbers are growing every day.

Wireless E9–1–1 is a much needed public safety service. In many cases it is the lifeline between our citizens and the emergency resources they need. This is what led the FCC to its E9–1–1 rulemaking. Even though the first deadline was 1 year ago, less than 2 percent of the wireless subscribers in the country have improved 9–1–1 services. This is not because the technology is not available, and it certainly is not because the wireless carriers are reluctant to provide it. Wireless E9–1–1 is not happening because of other

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challenges that must be overcome in order to provide these services to the public.

The major challenge I would like to discuss today is liability. Wireless carriers and E9–1–1 service providers must be allowed to operate under the same liability standards that apply to wireline phone companies and their 9–1–1 service providers. As I mentioned, my company provides 9–1–1 services to both wireline and wireless phone companies. It does not make sense that the same service I provide one company is subject to a totally different set of standards when I provide it to another company just because the technology is not identical. It should make no difference whether it is wireline or wireless. However, as the law stands now, a different standard applies to wireline and wireless carriers in most markets. S. 800 corrects this problem and will provide a fair and level playing field for companies that help deliver 9–1–1 to the public.

Chairman Burns' bill will not only promote more widespread use of emergency technologies, but it will also encourage the development and implementation of new 9–1–1 technologies. These new technologies will improve public safety's ability to care for people in emergencies. I can give you an example.

My company has developed a program known as Emergency Warning and Evacuation. This program uses the 9–1–1 infrastructure to make high volumes of outbound 9–1–1 calls to warn residents of impending danger. In the event of a flash flood, a tornado, hazardous material spill, or other threatening situation, this technology geographically identifies affected areas and makes thousands of calls per minute which deliver appropriate warnings and instructions to residents at risk. The EWE service can be configured to deliver special voice, TDD, or fax messages, and can even be programmed to deliver messages in a phone subscriber's language of choice. Where in the past we relied on simple sirens that may have confused some or left others behind, we now have technology that be customized to warn people appropriately and direct them to safety.

I use EWE as an example because this outbound E9–1–1 service is only available to wireline phone users currently. Enactment of S. 800 which will help speed the implementation of wireless E9–1–1, will also help speed up our ability to include wireless subscribers in EWE and other advanced emergency services.

Time is everything in an emergency. Quick responses by public safety and law enforcement officials can mean the difference between life and death for accident and crime victims. Making 9–1–1 the universal emergency number for every phone without regard to technology is an important and immediate first step toward improving emergency response. A single emergency number, replacing over 20 different emergency numbers, will save lives.

We all teach our children to dial 9–1–1 in an emergency, but then we create different emergency numbers for wireless phones. That makes no sense. We cannot expect adults, much less young children, to remember special emergency numbers that only apply to wireless phones. Making 9–1–1 the universal emergency number is not just smart policy, it is good common sense.

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The bottom line here is safety. Our Nation's wireline and wireless telephone network is rapidly evolving both technically and from a business standpoint. It is a fundamental component of our national infrastructure. We depend on it every day for the people we love and for ourselves. Instituting the universal 9–1–1 number and liability parity will enable the telecommunications industry and public safety to develop the best emergency communications system the world has ever seen. I urge you to pass S. 800.

Thank you again for the opportunity to testify here today. I would be happy to answer any questions you may have.

[The prepared statement of Mr. Heinrichs follows:]

PREPARED STATEMENT OF GEORGE HEINRICHS, PRESIDENT AND CEO, SCC COMMUNICATIONS CORPORATION, BOULDER, COLORADO

Good moming, Chairman Bums and members of the subcommittee. I am George Heinrichs, President and CEO of SCC Communications Corp. of Boulder, Colorado. I appreciate the opportunity to testify in favor of the *Wireless Communications and Public Safety Act of 1999.*

After spending more than ten years in the public safety profession working as an emergency medical technician, a 9–1–1 dispatcher, and a law enforcement officer, I decided to start my own company. In 1979, I co-founded SCC which is now the largest and fastest growing 9–1–1 services and technology company in North America. We have expanded from a two-person start-up to a publicly traded company employing 300 people. SCC provides products and services for approximately 30 wireless and wireline carriers and their customers throughout the United States.

For years I have played a role in the implementation of wireline enhanced 9–1–1 and have directly witnessed situations where it made the difference between life and death. While enhanced 9–1–1, or E9–1–1 for short, is now commonplace on the wireline side, it is still in its infancy on the wireless side. As many people have pointed out, when a person dials 9–1–1 from his wireline phone, the emergency call taker or dispatcher receives data showing both the phone number and address where the call was placed. This is what "enhanced" 9–1–1 *is*—information identifying the emergency caller's number and location that is transmitted to public safety personnel instantaneously. It is information that saves lives.

Right now, E9–1–1 is not deployed for most wireless callers. Today when that same caller dials 9–1–1 on his wireless phone, the emergency operator receives no identifying information such as call back number or location. In fact, wireless emergency calls are often routed to the wrong jurisdiction. Even when the wireless 9–1–1 call goes to the right place, if there is a disruption in service or if the caller hangs up, the emergency dispatcher has no way of reconnecting with that caller. Implementing wireless E9–1–1 will correct this problem.

Industry estimates put the wireless 9–1–1 call volume at 98,000 calls per day across the United States. Public Safety Answering Points around the country report that between 25 and 33 percent of the calls they receive originate from wireless phones. And these numbers are growing every day.

Wireless E9–1–1 is a much needed public safety service. In many cases it is the lifeline between our citizens and the emergency resources they need. This is what led the FCC to its 9–1–1 rulemaking that called for the first phase of wireless E9–1–1 service by April, 1998 and fully implemented wireless E9–1–1 by October, 2001. Even though the first deadline was one year ago, less than 2 percent of the wireless subscribers in the country have the improved 9–1–1 services the FCC ordered. This is not because the technology is not available. And it is certainly not because the wireless carriers are reluctant to provide it. Wireless E9–1–1 is not happening because of other other challenges that must be overcome in order to provide these services to the public.

The major challenge I would like to discuss today is liability. Wireless carriers and E9–1–1 service providers must be allowed to operate under the same liability standards that apply to wireline phone companies and their 9–1–1 service providers. As I mentioned, my company provides 9–1–1 services to both wireline and wireless phone companies. It does not make sense that the same service I provide one company is subject to totally different standards when I provide it to another company just because the technology is not identical. It should make no difference whether the carrier is an ILEC, CLEC, or wireless. However, as the law stands now, a different standard applies to wireline and wireless carriers. S.800 corrects this problem

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and will provide a fair and level playing field for companies that help deliver 9–1–1 to the public.

Chairman Burns' bill will not only promote more widespread use of current emergency technologies but it will also encourage the development and implementation of new 9–1–1 technologies. These new technologies will improve public safety's ability to care for people in emergencies. I can give you an example. My company has developed a program known as "Emergency Warning and Evacuation" (EWE) which we have agreed to deploy in Boulder, Colorado. This program uses the 9–1–1 infrastructure to make outbound 9–1–1 calls to warn residents of impending danger.

In the event of a flash flood, tornado, hazardous materials spill or other threatening situation, this technology geographically identifies affected areas and makes thousands of calls per minute which deliver appropriate warnings and instructions to residents at risk. The EWE service can be configured to deliver specific voice, TDD or fax messages and can even be programmed to deliver messages in a phone subscriber's language of choice. Where in the past we relied on simple sirens that may have confused some or left others behind, we now have technology that can be customized to warn people appropriately and direct them to safety.

Our current emergency communications infrastructure needs to catch up with our other technological advances. Thanks to science, we can now track and model a storm's path. Yet most citizens rely on their TV weatherman or decades-old sirens systems for last minute evacuation warnings.

I use EWE as an example because this outbound E9–1–1 service is only available to wireline phone users currently. Enactment of S. 800, which will help speed the implementation of wireless E9–1–1, will also help speed up our ability to include wireless subscribers in EWE and other advanced emergency services.

As you know, high technology is not developed in a vacuum. Each advancement opens a door to hundreds of new advancements. We have the technologies to build a twenty-first century emergency system that fully utilizes the best wireline and wireless technologies available. Chairman Burns' bill is key to realizing this goal.

As a former public safety and law enforcement official, I understand the importance and the need for an end to end integrated communications system to support public safety. Time is everything in an emergency. Quick responses by public safety and law enforcement officials can mean the difference between life and death for accident and crime victims. Making 9–1–1 the universal emergency number—for every phone without regard to technology—is an important and immediate first step toward improving emergency response. A single emergency number, replacing over 20 different emergency numbers *will* save lives.

We all teach our children to dial "9–1–1" in an emergency, but then we create different emergency numbers for wireless phones. That makes no sense. How many news stories have we seen where a three or four year old saves his parent's life by dialing 9–1–1? I have seen several. How many have we seen where a three year old knew to dial "#77" because the child could distinguish the car phone from the home phone? I doubt there are many lifesaving "#77" stories. And I happen to know of at least one tragic story that resulted because people did not know the wireless alternative to 9–1–1. Making "9–1–1" the universal number is not just smart policy; it is good common sense.

I have traveled around the world reviewing emergency telecommunications infrastructure. While we have the most advanced emergency telecommunications system I have seen, we must ensure that it continues that way. Our emergency system advancements should track with our rapid technological advancements. The bottom line here is safety. Our nation's wireline and wireless telephone network is rapidly evolving both technically and from a business standpoint. It is a fundamental component of our national infrastructure. We depend on it every day for the people we love and for ourselves. Instituting the universal 9–1–1 number and liability parity will enable the telecommunications industry and public safety to develop the best emergency communications system the world has ever seen. I urge you to pass S. 800.

Thank you again for the opportunity to testify here today. I would be happy to answer any questions you may have.

Senator BURNS. Thank you very much, Mr. Heinrichs.

Mr. Tom Wheeler, President and CEO of Cellular Telecommunications Industry Association. Welcome, Tom. Nice to have you here today.

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STATEMENT OF THOMAS E. WHEELER, PRESIDENT AND CEO, CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION, WASHINGTON, D.C.

Mr. WHEELER. Thank you, Mr. Chairman, and thank you to you and Senator Wyden for the leadership that you have shown on this issue.

The wireless phone is the greatest safety tool since the development of 9–1–1. As you said, Mr. Chairman, 98,000 times a day someone uses their wireless phone to call for help, to save a life, to stop a crime, to help somebody in need. But it can also do even more, and that is why we commend you for the leadership that you are showing on this particular piece of legislation.

What we have learned from emergency doctors, trauma doctors, and emergency service personnel is that the most important factor in determining survivability after an incident is time. Let me show you a quick chart here that is an indicator of the correlation between time and safety.

[Chart.]

Look at the number of miles traveled in a rural area versus the accident fatalities in a rural area, and then look at the explanation for that below in terms of the length of response time before the initial call was made. This is a result of a study done for the Department of Transportation.

Now look at what happens if that initial notification period of time is reduced in rural areas to approximate or exceed that which is in urban areas.

[Chart.]

Reducing response time saves thousands of lives.

There are 74 million safety sentinels on the street today with wireless phones who have the ability to do exactly what that chart says: reduce the notification time and therefore save lives.

The difficulty is that there are, as you pointed out, Mr. Chairman, impediments to their ability to act quickly, and these impediments are artifacts to the pre-wireless age. The number 9–1–1 does not always work, as you indicated.

There is a lack of coordination among various public safety agencies. A wireless licensee serves a large market that has, in some cases, up to 100 different answering points that need to coordinate. They did not used to have to coordinate as much when it was only a wireline environment, but in wireless they need to coordinate to have a joint policy.

The last historical artifact is the liability exposure to emergency personnel, public safety answering points, Good Samaritans who call and use their phone, and wireless carriers. Let us look at each one of those for a second.

As you said, dialing 9–1–1 on a wireless phone does not always work. In over 20 States, 9–1–1 is the wrong number to dial from a wireless phone. That is a historic carryover from the days when we were talking about car phones, and the car was going to be on the highway. So, let us have the call go to the highway patrol, and let us have a special highway patrol number like *GHP for the Georgia Highway Patrol or something like that. Today these phones fit in our pocket. They go everywhere. This is not a car

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phone. This is a phone, and this needs to have the same emergency phone number that Americans have come to expect. Your bill, S. 800, erases that aberration.

Now, let me show you another chart here which is an example as to why the State coordination that your bill provides is very important.

[Chart.]

Mr. WHEELER. On the left is a letter from the Virginia Highway Patrol to one of the new, competitive wireless operators in the State of Virginia saying we will not handle your 9–1–1 calls. We have too many calls already from wireless phones. The solution is we will not take the call. We will pass it off to the localities.

On your right is a letter from one of the localities saying, that is not our job in Virginia. 9–1–1 calls are handled by the State Highway Patrol. So, while this ping-pong was going on back and forth, safety calls were falling between the cracks.

There is a need for coordination that says we are in a new world, we are in the wireless world. Let us figure out a new statewide plan, and your bill encourages the FCC to work with States to do that.

I am happy to report that in the State of Virginia, because of Chairman Bliley's involvement in the House, they are now starting down that kind of a road as envisioned in your bill.

Finally, another example of how S. 800 can help keep pace with change, is the issue of the potential liability of emergency service personnel, Good Samaritans, the wireless industry, and wireless carriers when they use their wireless phone. An enabler of wireline success for 9–1–1 has been the limitation on liability for those who use or operate 9–1–1. That limitation says you should focus on saving lives, not focus on saving your legal neck. That works splendidly in a wireline environment.

Can we make it work in a wireless environment? S. 800 takes whatever each State has independently done for wireline and says this will be the rule for wireless liability for PSAP's, emergency personnel, Good Samaritans, and the industry.

Thank you, Mr. Chairman. We appreciate, as I said, your leadership on this, Senator Wyden's leadership on this, as well as Senator McCain's and Senator Dorgan's. We hope the Senate will join with the 415 members of the U.S. House who have already voted in favor of this legislation and help emergency services save lives by keeping pace with technological change. Thank you, sir.

[The prepared statement of Mr. Wheeler follows:]

PREPARED STATEMENT OF THOMAS E. WHEELER, PRESIDENT AND CEO CELLULAR TELECOMMUNICATIONS INDUSTRY ASSOCIATION

MAY 12, 1999.

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to appear before you today to present the wireless industry's views on legislation to promote and enhance public safety through the use of emergency 9–1–1 service. I am Thomas E. Wheeler, President and CEO of the Cellular Telecommunications Industry Association (CTIA) representing commercial wireless telecommunications carriers, including cellular and personal communica-

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tions services (PCS) and their suppliers and vendors.[1] The wireless industry is founded on innovation, competition and safety. Today, my testimony will focus on safety and discuss how Congress can be instrumental in delivering unprecedented safety benefits to consumers across America.

WIRELESS IS THE GREATEST SAFELY TOOL SINCE THE DEVELOPMENT OF 9–1–1

S. 800 is the cornerstone of our industry's efforts, in cooperation with many others, to enhance wireless public safety capabilities and in the process save lives. We are proud that the commercial success of wireless communication is linked to an enormous public safety benefit: nearly 100,000 emergency wireless calls a day, delivered without charge by our members.

Year	Wireless subscribers	U.S. 911 annually	U.S. 911 monthly	U.S. 911 daily
1985	340,213	193,333	16,111	530
1995	33,785,661	20,059,894	1,671,658	54,959
1998	69,209,321	35,805,405	2,942,910	98,097

There are now nearly 74 million "safety sentinels" in the United States—74 million subscribers who speed the delivery of safety services by providing rapid reports of car crashes, aggressive and impaired driving, serious crimes, and other threats to our communities. There are literally thousands of Americans who credit their wireless phone with aiding a fellow citizen, preventing a crime or in the ultimate form of public safety expression, saving a life—it is a distinction that the wireless industry is proud of and inspired by. CTIA will continue to work diligently to press for legislation that improves the safety role of wireless telecommunications.

Just in the last few days we have been reminded of the incredible safety value of wireless communications. In Georgia, a young mother and her infant daughter were abducted by carjackers while on a shopping trip. Thanks to the incredible courage of a young lady, an alert 9–1–1 dispatcher and a wireless phone, the carjackers were apprehended and Esther Green and her 10-month-old daughter were released unharmed. Last week in rural Utah, Dr. Ron Clark, his two sons and 12 other snowboarders were swept up in an avalanche, buried in the snow. Dr. Clark was able use his wireless phone to call for help. In Oklahoma, immediately following the deadly tornadoes, a wireless phone was used by a family trapped in a cellar to call for help. These are not isolated cases—every single day in America, wireless phones are used to increase public safety.

Highway crashes are the leading cause of death for Americans between the ages of 1 and 44. Crashes are the fourth leading cause of death overall. Each year, nearly 42,000 Americans die in automobile crashes and 5.2 million people are injured in crashes. The Departinent of Transportation estimates the societal and property cost of crash injuries and deaths at $150 billion per year. Emergency medical professionals talk about "golden minutes" and the "golden hour" because getting proper care to crash, heart attack, or other victims quickly often means the difference between life and death. Reducing response time by mere minutes could save thousands of lives in the U.S. each year. S. 800 will aid in speeding assistance to those in need.

Chairman Burns, upon introduction of the Wireless 9–1–1 bill you stated:

> "The National Highway Traffic Safety Administration has conducted studies showing that crash-to-care time for fatal accidents is about a half hour in urban areas. In rural areas, which covers most my home state of Montana, that crash-to-care time almost doubles. On average, it takes just shy of an hour to get emergency attention to crash victims in rural areas. Almost half of the serious crash victims who do not receive care in the first hour die at the scene of the accident. That's a scary statistic."

Response time is critical in rural areas and the industry is continually searching for technologies to reduce the time it takes for emergency personnel to arrive at the scene of an accident. Coupling several technologies with wireless communications

[1] CTIA is the international organization which represents the Commercial Mobile Radio Service (CMRS) industry, including cellular, personal communications services, wireless data. CTIA has over 750 total members including domestic and international carriers, and manufacturers of wireless telecommunications equipment. CTIA's members provide services in all 734 cellular markets in the United States and personal communications services in all 50 major trading areas, which together cover 95% of the U.S. population.

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can lead to incredible public safety benefits. Technology improvements affecting public safety, such as automatic crash notification (ACN), need to be encouraged by the Administration and members of this committee.

In the last two years, we have expanded our safety efforts considerably by working with and learning from 9–1–1 directors, Emergency Medical Services experts, the American Automobile Association (AAA), the National Emergency Numbers Association (NENA), the Associated Public Safety Communications Officials (APCO), and many others on how to better serve the public. Last year, CTIA joined with state and local public safety officials, emergency and trauma care physicians, emergency nurses, other medical professionals, and health care groups like the Brain Injury Association and the American Burn Association to form the ComCARE Alliance which stands for "Communications for Coordinated Assistance and Response to Emergencies"—a coalition with which many of you are familiar. We continue to work with these organizations to provide a system that reduces response times to emergencies, lessens the severity of injuries and saves lives. Together, with ComCARE, we support this legislation, and together we are working to deploy these advanced technologies in the states.

There are several immediate issues we must address to provide enhancement of 9–1–1 services.

The safety agenda includes:

- Universal 9–1–1 number.
- Encourage FCC leadership in support of state emergency service planning.
- Limitation of liability.
- Technologies that improve wireless emergency services.
- Advancement towards a seamless, ubiquitous system.

DESIGNATION OF A UNIVERSAL 9–1–1 NUMBER.

The first requirement in achieving the safety goals of the wireless industry is the designation of the number 9–1–1 as a uniform and universal telephone number within the United States for reporting an emergency, whether on wireless or wireline telephones. The same designation also would be required by any numbering agency or entity to which the FCC has delegated authority under section 251(e) of the *Communications Act of 1934.*

Wireless telecommunications is mobile and therefore no one consumer can be expected to know the approximately 20 different emergency wireless numbers across the United States. The lack of a uniform wireless emergency dialing code creates unnecessary confusion and impairs the ability of mobile customers to request emergency assistance quickly and easily. Even along an interstate highway within one state, a mobile customer may be required to know and dial different numbers to reach the right emergency response agency. Wireless carriers can program their switches to route a 9–1–1 call to any single emergency services number a state tells us to call, but too often carriers are prevented from delivering that call. In suburban Chicago, for instance, because of liability concems, PSAPs are refusing to process wireless 9–1–1 calls, requiring carriers to send E 9–1–1 calls to a third party that answers the call and then routes it to the appropriate safety agency.

The *Saint Louis Post Dispatch* recently reported polling that showed that 90 percent of those polled said they rely on 9–1–1 to connect them to help in an emergency. However, more than half of Missourians surveyed did not know that "Star 55" is the emergency number to call on your wireless phone, not 9–1–1. As stated by Representative Pat Danner (MO–6th) in a December 8, 1997 editorial in the Kansas City Star, "If a motorist were to travel from Kansas City to Washington D.C. on Interstate 70, the traveler would have to know to dial *55 in Missouri, *999 in Illinois, 9–1–1 in Indiana, *DUI in Ohio, 9–1–1 in Pennsylvania and *77 in Maryland. Further, in the United States as a whole, there are as many as 25 different cellular assistance numbers. The system should not be so convoluted."

Congressional action to designate 9–1–1 as the universal wireline and wireless emergency number in the U.S. would provide protection to all Americans against senseless tragedies. A uniform national pn'mary emergency telephone number is increasingly important because so many Americans use wirelesses telephones to report emergencies, and increasingly these same Americans are using their wireless phones outside of their local service area (in areas where they are less likely to know the local primary emergency number if that number is not 9–1–1).

IMPLEMENTATION OF STATEWIDE PLANS

S. 800 encourages statewide coordination of the efforts of local public safety, fire service and law enforcement officials. The emergency communications needs of the United States are currently served by 5,000 Public Safety Answering Points

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(PSAPs). These PSAPs are generally housed within local government organizations, such as the local police or fire department. Most PSAPs are autonomous units from others in their state. Some states have adopted uniform statewide enhanced 9–1–1 implementation plans, and designated a single official in charge of 9–1–1 for the entire state in order to have better emergency communications services. Other states separate wireless calls from the 9–1–1 structure, sending 9–1–1 calls to a state police office, even if it is located miles away from the emergency. Comprehensive and coordinated state plans are needed so that calls get routed to the appropriate place in a timely manner.

A significant barrier to implementing location and other wireless safety advancements expeditiously is that public safety centers and PSAPs in many states are coordinated by a variety of local, county, and state government and regulatory authorities. This creates a difficult environment for private sector carriers to readily implement safety technology improvements when they must work out individual technology and funding arrangements on a county by county, or worse yet, a city-by-city basis.

A wireless carrier in Virginia is a case study into why statewide plans are needed. Triton PCS, Inc. has been licensed by the FCC to provide wireless communications (PCS) service throughout the Commonwealth of Virginia (other than Northem Virginia). Outside of Northern Virginia, the State Police receive most wireless 9–1–1 calls. If the call is not one for which the State Police is the appropriate public safety agency, the call is routed to the local PSAP. In its attempt to establish service in Virginia, Triton telephoned and wrote to the State Police, requesting the State Police provide Triton the applicable State Police 9–1–1 routing numbers. On each occasion, Triton was informed that the State Police would not accept 9–1–1 calls from new wireless providers in Virginia, and that Triton should contact each PSAP in Virginia for its routing information.

For months Triton contacted literally dozens of PSAPs in Virginia. PSAP Administrators repeatedly told Triton that wireless 9–1–1 calls in Virginia are routed to the State Police. In light of the contrary information, Triton subsequently sent faxes, and then certified letters to sixty-six PSAPS, requesting their respective 9–1–1 routing information. Many of the written responses repeat that the State Police handle wireless 9–1–1 calls in Virginia and should be contacted instead of the PSAPS. As an item of interest to Chairman Bliley in the House, this issue was recently resolved but clearly indicates statewide planning and cooperation needs to be encouraged.

The legislation also clearly tells the FCC to encourage Governors to bring together all the parties which can contribute to solutions, not just PSAPs and the wireless industry: from emergency medical leaders, to law enforcement and fire officials, to transportation officials, to organizations like AAA. In a very real sense, our members and the PSAPs *together* are providing emergency communications that help these groups deliver emergency services to the public. We are serving *their* needs, so we are committed to having them at the table as state wireless safety and E9–1–1 deployment plans are developed and implemented.

NEW TECHNOLOGY SHOULD RECEIVE SIMILAR PROTECTION

The wireless industry is working with the Federal Communications Commission (FCC) in implementing solutions required to meet the FCC's Report and Order regarding enhanced (E9–1–1) services.[2] The lack of limitations on liability for wireless carriers—on a par with that provided to wireline carriers—is one of the most significant barriers to the implementation of wireless 9–1–1 and enhanced 9–1–1 services today. Wireless carriers are committed to providing the best possible service, but because of the nature of wireless technology there will be an occasional gap in coverage, interference from buildings or trees, discharged batteries, or other technical problems. These technological limitations—which are beyond the control of wireless carriers—subject the carriers to unacceptable risk of lawsuits for failed emergency calls. Likewise, the parity which is appropriate between wireline and wireless carriers ought to also apply to the entity receiving the call, the PSAP. There is no reason why a lower liability standard should apply to a PSAP because a 9–1–1 call came via wireless rather than wireline.

[2] By April 1, 1998, wireless carriers must have initiated actions necessary to relay a caller's location (Automatic Number Identification) and the location of the cell site and sector receiving an E9–1–1 call. Phase II calls for carriers, no later than October 1, 2001, to have the capability to identify the latitude and longitude of the mobile units making E9–1–1 calls within a radius of 125 meters. Both Phase I and II requirements apply only if the carrier receives a request for such a service from a PSAP capable of receiving and using the service and a mechanism for the recovery of costs relating to the provisions of such services is in place.

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CTIA strongly supports the inclusion of liability provisions in S. 800. These provisions will promote the deployment of wireless E9–1–1 services by removing a cloud of uncertainty that currently hangs over wireless carriers when they offer those services. These provisions are a reasonable accommodation of the needs of wireless carriers and the rights of the states to determine liability issues. Significantly, this bill does not preempt states. Rather, it simply applies a state's policies on wireline liability to wireless carriers.

Landline local exchange carriers historically have enjoyed broad immunity from liability for their role in delivering 9–1–1 calls. In order to ensure that landline carriers provided emergency services to all callers without discrimination—and to ensure that the costs of providing emergency services were not so great that they would prevent carriers from providing this publicly beneficial service—government policy makers determined that landline carriers should be able to limit their liability for damages for calls that did not go through (typically requiring a showing of more than simple negligence). The historical basis for limiting the liability of landline carriers has equal force for wireless carriers providing 9–1–1 service.

If wireless carriers were permitted to decide whether or not to offer E9–1–1 service they could evaluate the risks of providing the service—including their exposure to liability and their ability to limit these risks—before providing that service. But because Federal law requires wireless carriers to provide E9–1–1 service, carriers are necessarily exposed to greater risk than they would willingly assume in the normal course of business. Wireless carriers' exemption from tariff filing requirements precludes them from using tariffs to protect themselves. Wireless carriers also cannot use contract provisions to protect themselves from liability because a recent FCC rule requires them to transmit all wireless 9–1–1 calls, even those from callers with whom the carrier does not have any contractual relationship.

Some opponents of liability limitations for wireless carriers argue that wireline carriers alone are "entitled" to these limitations because they are subject to continued rate and entry regulation while wireless carriers are not. Their arguments are unavailing for several reasons. *First,* in deregulating wireless carriers in 1993, Congress did not exempt them from public utility obligations. To the contrary, wireless carriers are by law "common carriers" with all of the accompanying obligations. More specifically, while free from tariff requirements, wireless carriers remain subject to Federal statutory obligations to charge just, reasonable, and nondiscriminatory rates. *Second,* the deregulation accorded wireless carriers in 1993 was in no way tied to the loss of protections against liability generally available to other common carriers. *Finally,* under current law wireless carriers must contribute to Federal and State universal service funds, a hallmark of "public utility" status.

Providing wireless carriers with equivalent liability protection is a simple matter of addressing two public policy goals: E9–1–1 and local competition. Carriers are being asked to expedite the deployment of wireless E9–1–1 systems. Congress and the FCC want location technologies deployed fast. Having wireless in a worse liability situation than wireline is clearly a disincentive to rapid deployment of these new technologies. Similarly, both Congress and the FCC want wireless to provide local telephone competition. It is harder to do that if we operate under different liability standards.

S. 800 does not preempt state law goveming liability. Rather, it ensures that wireless carriers will enjoy the same protection from liability that wireline carriers enjoy today, whether they receive that protection from tariffs, contracts, or State or Federal statutes. S. 800 will provide wireless carriers with the minimum level of protection that they need in order to provide E9–1–1 services to consumers everywhere. I commend you for including this protection in the Wireless Communications and Public Safety Act of 1999.

TECHNOLOGIES THAT IMPROVE WIRELESS EMERGENCY SERVICES

The wireless industry is dedicated to improving and enhancing wireless emergency communications to further enhance call completion. The wireless industry supports "automatic A/B roaming," a solution that would enhance 9–1–1 call completion, but would also support a generic functional requirement that would permit multiple technical solutions to enhancing wireless 9–1–1 call completion.

We also need to implement E9–1–1 so we can get on to a very exciting new technology which combines wireless with the increasing computerization of cars. In very short order we could and should see the deployment of automatic crash notification technology which, at the instant of a car crash, will provide emergency officials with sensor data about the crash allowing them to predict the severity of injuries. We strongly support federal funding of ACN field trials with trauma experts so that fu-

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ture ACN technology can be used to predict the specific types of injuries a victim is likely to have.

We compliment the Department of Transportation on its groundbreaking research in this area, but much more needs to be done.

COVERAGE: ADVANCEMENT TOWARDS A SEAMLESS, UBIQUITOUS SYSTEM

In enacting the wireless telecommunications provisions of the Omnibus Budget Reconciliation Act of 1993 and the Telecommunications Act of 1996, Congress carefully weighed the national interest in a seamless, ubiquitous and reliable wireless infrastructure and the interest of States and localities in regulating placement of wireless antennas. Congress avoided the extreme of stripping States and localities of any voice in the placement of antennas and the other extreme of empowering States and localities to completely veto expansion of the wireless infrastructure. We understand that the National League of Cities (NLC) and the National Association of Counties (NACo) support this legislation as written. We think this is a very positive step and will continue to work with these organizations and others to advance public safety.

Today, in both chambers, efforts are underway to destroy this delicate balance. If successful, these efforts will delay the buildout of our nation's telecommunications infrastructure and ultimately denigrate the role of wireless communications in emergency services. I urge this Committee to counter efforts detrimental to the health and welfare of American citizens. Without antennas there will be "dead zones" and as a result emergency calls will fail to go through.

The wireless industry and most States and localities have established good working relationships on antenna siting issues and our industry is working hard to adopt policies that avoid disputes before they occur. The Federal Communications Commission has established a Local and State Govenunent Advisory Committee ("LSGAC") and has facilitated discussions between the LSGAC and CTIA and other trade associations representing the wireless industry. As a result, local and State governments and the wireless industry have adopted guidelines for siting wireless facilities. When there is a dispute, States and localities and the wireless industry have agreed to use an informal dispute resolution process. As a result of this cooperative agreement, CTIA withdrew a petition it had filed with the FCC seeking preemption of local tower siting moratoria. As further evidence of this cooperative effort, CTIA, the American Hiking Society (AHS) and the Appalachian Trail Conference (ATC) have reached a consensus to develop a voluntary early notification and education process when industry proposes locating antenna sites within one mile from a National Scenic Trail. Enactment of yet another set of Federal mandates on consideration of siting decisions would disrupt these effective relationships.

As Susan Hoyt, immediate past President of the Emergency Nurses Association, said in Congressional testimony last year:

> "Federal, state and local governments have a responsibility to make emergency communications possible by encouraging and allowing the construction of ubiquitous, seamless wireless networks. We are not asking you to pre-empt any local zoning authority. The 1996 Telecommunications Act says that networks should be seamless, and no governmental body can bar wireless communications from its jurisdiction. Wireless carriers need to work with local communities to find locations for antennae to build out their networks, but the local communities cannot say "no" if that will result in a dead zone in the network."

Recently, some have suggested that emergency calls can be handled by alternatives to terrestrial based systems such as satellite networks handling all emergency calls thereby removing the need for antennas. This is simply not an option—nor will it be anytime soon. The President of Iridium, one of the satellite communication industry's providers, explained why this is a fallacious argument by noting that on the East Coast of the United States, Iridium can only handle 750 calls simultaneously. 9–1–1 calls alone would overwhelm the Iridium system and be cost prohibitive. Furthermore, Iridium uses terrestrial systems as its primary routing backup for calls and in fact depends on wireless terrestrial systems.

I realize that federal siting has been removed from the wireless 9–1–1 bill Senators McCain and Burns introduced last year, but I would be remiss if I did not touch upon it and use an example of how federal siting remains a problem. Even with a universal wireless emergency number, liability protection and statewide plans, all are useless if a call is placed in an area without wireless coverage. Protecting the public's health and safety through the use of our telecommunications infrastructure is not simply a matter of telling everyone to dial 9–1–1. The call must go through. One part of the solution to this problem is to improve on the use of

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thousands of Federal buildings and other structures, as well as millions of acres of Federal land, to help fill those dead zones.

Neither the President's 1995 Memorandum to Federal agencies urging them to facilitate the placement of wireless antennas on Federal property, nor section 704(c) of the Telecommunications Act of 1996, which directed them to do so, has resulted in a change of attitude on the part of most Federal agencies with respect to this subject. With a few welcome and notable exceptions—including the Postal Service, General Services Administration, Bureau of Land Management, and the Forest Service—most Federal agencies continue to ignore this imperative completely, or to erect uneconomic, if not insurmountable, barriers to wireless antenna siting.

After five plus years of debate and discussion, thousands of dollars in time and expenses spent on studies, the National Park Service ruled in March of 1999 to allow a CTIA member to erect two antennas in Rock Creek Park. Two antennas to provide coverage for the carrier's customers as well as provide wireless assistance in the event of an emergency. The seemingly endless battle continues though with the decision in April to disapprove of the telecommunications facilities by the National Capitol Planning Commission (NCPC). If you multiply the Rock Creek Park situation over and over again, you will begin to understand what we face on a regular basis from the Park Service and other Federal agencies across the country. If together we are to create the seamless end-to-end public safety communications system that we all envision, this kind of bureaucratic obstinacy must cease.

We are pleased, Mr. Chairman, that you and the Members of this Committee and Subcommittee, on a broad and bipartisan basis, have recognized the importance of this safety agenda. CTIA encourages you and the Subconimittee to move forward once again to weave the next generation of wireless technology together with the sophisticated medical and emergency response capabilities now in place or under development, in order to create the seamless, ubiquitous, end-to-end communications infrastructure for public health and safety envisioned by S. 800.

Thank you for your consideration of our views.

Senator BURNS. Thank you, Mr. Wheeler. By the way, I should tell you that all your formal statements will be made part of the record. I forgot. The article out of the Post will be included in the record today.

I have just destroyed your last name. Wildey I would imagine. Is that the way we pronounce it?

Mr. Wildey Sir, it is Wildey.

Senator BURNS. Wildey? Was there a song like that at one time? [Laughter.]

Senator BURNS. I do not think so. But we welcome you here today, Mark, from Colorado and we look forward to your testimony.

STATEMENT OF MARK WILDEY, MANAGER OF COMMUNICATIONS TECHNOLOGIES, WEST METRO FIRE PROTECTION DISTRICT, LAKEWOOD, COLORADO

Mr. WILDEY. Good morning, Chairman Burns and members of the subcommittee. I am Mark Wildey, the Manager of Communications Technologies for the West Metro Fire Protection District. West Metro covers 120 square miles of the eastern portion of Jefferson County, Colorado. Columbine High School in Littleton is an area immediately adjoining our jurisdiction. We were one of the public safety agencies that responded to the crisis at Columbine High School on April 20th.

Since the purpose of this hearing is to discuss wireless enhanced 9–1–1, I would like to tell you a bit about that tragic day in Littleton and explain how wireless phones played a role in saving lives.

On the morning of April 20th, our district received a preliminary report of activity about a weed fire near the school. We dispatched a unit to handle that, and our people determined that the fire was caused by a backpack that contained motion-activated explosives.

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That was the beginning of what would be a long and harrowing day for everyone in our community. From that point on until 18:18 that evening, our district had paramedic units, as well as command staff stationed at Columbine High School.

West Metro received a total of 48 fire and EMS calls that day. Along with 14 other public safety agencies in the area, we fielded 9–1–1 calls, dispatched emergency units and personnel, and tried to bring order out of chaos. In my agency, we have 40 cell phones and we utilized over half of them on April 20th. Our wireless phones enabled our people to communicate with other public safety personnel at various points around the school and talk to those of us at dispatch without tying up 9–1–1 trunks. Cellular provides an important communication link where oftentimes interagency radio interoperability falls short for a myriad of reasons.

Equally important as the cell phones we used were the ones used by students. Because of the wireless phones, we were able to maintain contact with the individuals inside the school and they helped us to know which people inside were secure and which people were in immediate danger. This allowed the direction of SWAT teams and then ultimately paramedics.

While wireless phones were a huge help to public safety, the technology still has limits when it comes to 9–1–1. One of the cell phone calls we received that day reported that a party in the gym was bleeding very badly. A SWAT team was sent to the gym and found no one injured, no signs of blood. In the middle of this horrific tragedy, someone had made a prank call to 9–1–1. We had no way of knowing who it was or where they were. This false alarm forced the commitment of precious resources when they were not needed.

These are just a few examples of why your bill, Senator Burns, is so important. Wireless phones are vital to 9–1–1, but we need wireless enhanced 9–1–1. We need to have call-back numbers and location information for people who call 9–1–1. We must have a path to be able to reconnect with people if the lines get disconnected. We need to know where to find people who call for help.

More and more our emergency calls are coming from wireless phones every day. In my center, I estimate that 20 to 30 percent of our 9–1–1 calls come from wireless phones. That means that 20 to 30 percent of the time my dispatchers have no idea where the callers are or how to get back in touch with them.

We have a migratory population today. Thanks to wireless phones, it is a population that can be in constant communication. More and more people carry phones with them wherever they go, knowing that help is only a phone call away. Through the media, we have educated the public to expect not only 9–1–1, but that the 9–1–1 call-taker will have automatic number identification and automatic location identification information. A majority of cell phone users have no idea that currently ANI and ALI are not provided for fire and police dispatchers when a 9–1–1 call is made. For those of us in public safety, though, we need more tools. We have seen how enhanced 9–1–1 has reduced emergency response times on the wireline side. We need to implement wireless enhanced 9–1–1 so we can achieve similar results on the wireless side.

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By passing the Wireless Communications and Public Safety Act of 1999, the Congress will advance the deployment of wireless enhanced 9–1–1. So often it is a tragedy that draws our attention to 9–1–1. But I am here today to thank you for the positive attention you bring to 9–1–1. This legislation, S. 800, can help public safety save thousands of lives.

Thank you for the opportunity to share my views with you today.

[The prepared statement of Mr. Wildey follows:]

PREPARED STATEMENT OF MARK WILDEY, MANAGER OF COMMUNICATIONS TECHNOLOGIES, WEST METRO FIRE PROTECTION DISTRICT, LAKEWOOD, COLORADO

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Equally important as the cell phones we used were the ones used by the students. Because of wireless phones, we were able to maintain contact with individuals inside the school. They helped us know which people inside were secure and which people were in immediate danger. This allowed the direction of SWAT teams and then ultimately paramedics.

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These are just a few examples of why Sen. Burns' 9–1–1 bill is so important. Wireless phones are vital to 9–1–1. But we need wireless enhanced 9–1–1. We need to have call-back numbers and location information for people who call 9–1–1. We must have a path to be able to reconnect with people if the line gets disconnected. We need to know where to find people who call for help.

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Senator BURNS. Thank you very much. We appreciate that very much.

Mr. Wildey, can you give me any idea, other than this tragic thing that happened at Columbine High School, how many bogus calls per day do you think are placed on 9–1–1 in your area? Have you any kind of a figure on that?

Mr. WILDEY. It is a relatively small number, sir, primarily due to the fact that the public does believe that ANI and ALI information—that is automatic number and location identification information—is transmitted to the dispatcher. So, being aware of that, the public is not ready to call 9–1–1 and report bogus calls.

Senator BURNS. In other words, when we have the technology to identify the wireless thing, that would help alleviate that problem a little bit?

Mr. WILDEY. Yes, sir, it would.

Senator BURNS. Tell me about the locator possibilities of new technologies when a 9–1–1 is dialed, the ability to advance our technologies to know exactly where that caller has placed the calls. Is that technology available today and can we use it?

Mr. WILDEY. I have seen some demonstrations, but it might be best for one of the technical people here to offer——

Senator BURNS. Mr. Heinrichs, do you want to respond to that?

Mr. HEINRICHS. Sure. I think there are two major types of technology that have been demonstrated now to successfully locate wireless phones. The FCC, in their action a couple years ago, established essentially a two-step path to get there. They deployed a program that had phase one which provides some basic interconnection, which is what we are really pursuing today across the Nation, and then there is a second phase called phase two. It has been demonstrated in Houston and in New Jersey quite successfully where they were able to locate cell phones within 125 meters of the actual caller's location, which is critical not just to find them but to cause the call to go to the right answering point so that the people there can really help.

Senator BURNS. Mr. Wheeler, I was alarmed that maybe only 2 percent of the cell phone operators have made any kind of improvement at all in enhancing their 9–1–1 after a year. Can you give me an idea of why more have not done it?

Mr. WHEELER. Sure. First of all, I want to emphasize that it was CTIA, on behalf of the wireless industry, who together with the 9–1–1 community, petitioned the FCC and said please put this rule in effect to require location. So, we have been proponents of doing it.

The difficulty that we have run into—is classic. It is one thing to say I want to do this. It is something else to go then do it. Your bill addresses two very key impediments.

One, as you heard testified previously, is the liability issue. It is untoward for the Federal Government to say to a company go out

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and do this and take additional liability upon yourself, and we will not give you the kind of liability limitations that others who have similar services have. So, that has been one limitation, as you heard testified to previously.

A second limitation has been the need to coordinate the overall program because the FCC rule requires that there be a coordinated system in place so that it can deal with the entirety of a license area, not just case-by-case PSAP's. So, to the extent that your bill provides for that kind of coordination, it removes another hurdle toward getting to that goal which we proposed in the first place.

I am also happy to say to you, Mr. Chairman, that as recently as Monday of this week, CTIA was meeting with the representatives of the 9–1–1 services working on common solutions to other problems that are coming up along the way. But two of the biggest problems are addressed in your bill.

Senator BURNS. Mr. Heinrichs, I am going to have you to respond to Mr. Wyden. I have got an emergency phone call. When the chairman of the Appropriations Committee calls you, you return that call right away. [Laughter.]

Mr. HEINRICHS. I understand.

Senator BURNS. If you want to respond to Mr. Wheeler's comments, you may.

Ron, you kind of take over for now. Thank you very much.

Mr. HEINRICHS. Thank you, Chairman.

I just wanted to make the point that we have more than 2,500 public safety agencies that have formally requested this service, which is a significant number across the United States. We have teams and deployment efforts throughout the U.S. and we have found the exact barriers that Tom alluded to here.

We saw early on some technical barriers. We have overcome most of those. Those are not real barriers anymore. We saw also that in the FCC's action, they failed to direct the local exchange carriers to cooperate or to participate in this effort, and we literally have had a couple of these large local exchange carriers who literally blocked the deployment of 9–1–1 on the wireline side. Now, we also have wireline carriers who have been extremely supportive. So, it is kind of a mixed bag.

But it is a huge coordination effort, and I think, as Mark and Tom can both tell you from both ends of the industry and from us sort of being in the middle, that it is an effort to get everybody lined up. I feel like it is moving in the right direction. The wireless industry is working very hard to get this rolled out, but liability has brought this to a dead stop in a number of States.

Senator WYDEN. Well, all three of you have given excellent presentations. Senator Burns and I often talk about how the language of the telecommunications debate so often does not resemble English, and all three of you have laid it out very clearly and succinctly.

I just have a few questions and hopefully Chairman Burns will be able to get back and I know he wants to pursue some areas with you as well.

Let me start with an issue I have long been interested in, Mr. Wheeler. I think you touch on it and it probably is an area we ought to spend more time with. That is this matter of dead zones

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with respect to service in America. If you are in a dead zone and you have an emergency, it is just about obvious that you are not going to have any way to get help in these life and death kind of situations.

I gathered that without the antennas—that is the heart of what constitutes a dead zone—and presumably if we can get a sensible national 9–1–1 policy, which is what Senator Burns and I and the other sponsors are trying to do, that ought to create an incentive presumably to have fewer areas without antennas and fewer dead zones.

But give us an idea today how many of these dead zones you think there are.

Mr. Wheeler I am not sure I can quantify it, Senator. It is interesting. It will literally vary by time of year whether there are leaves on the trees, the sunspot activity, these kind of things, as to how a call operates because it is a radio.

But let me give you a specific example that I think demonstrates your point is right on target.

As the chairman indicated, this bill this year does not deal with what a similar bill dealt with last year, which was the siting of antennas on Federal property. You know, the President about 5 years ago issued a Presidential memorandum directing the agencies of the U.S. Government to facilitate the siting of wireless antennas. This was a twofer because it was pro-safety. As you point out, the call has to go through. Second of all, the money from the leasing was going to flow into the Federal Treasury, and it could be millions of dollars.

The agencies have, with some exceptions, thumbed their nose at this, and the classic example is right here in Washington, D.C. in Rock Creek Park. The National Park Service for years was nonresponsive to requests from people who used the park to do things as simple as use an existing light tower at the tennis stadium in Rock Creek Park. Build no new structure, but just put an antenna on that existing light tower. Finally, because of the work of some of the Members in the House, particularly Mr. Markey and Mr. Tauzin, they began to move forward on that. Lo and behold, the National Capital Planning Commission, an agency with no administrative rules, an agency for which there is no appeal rights, has now come in and said you cannot do this to provide safety to people in Rock Creek Park because we do not like it.

The difficulty is, as you point out, the 9–1–1 call then does not go through. Iit is illogical but it is a reality that we face across the country.

Senator WYDEN. Well, that is helpful. I gather that you think that on any given day in America there are a significant number of dead zones.

Mr. WHEELER. Well, I think the important thing to recognize, Senator, is that the vast, vast, vast, vast majority of calls go through. There are clearly instances where calls do not get completed for a variety of reasons. It is the donut versus the hole, but we all need to work together to do something about the hole in the donut.

Senator WYDEN. Let me turn next to the liability issue. I think it is pretty obvious that Chairman Burns and I share your concerns

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and we want to address the liability issue responsibly. Obviously, we are going to have some questions about how this affects State and local laws. But why do we not just go down the table and have each of you give us an example of the kind of liability problem that strikes you as especially serious. Just lay out briefly a case you had that would best buttress your view, one that I share, that we have got a liability problem. Maybe we will start with our friends from Colorado and just go down.

Even just based on that Washington Post article that I was reading from and that you touched on, I assume that even there, if channels are jammed because of demand, there are liability issues involved. Maybe you can just give us an example, each one of you.

Mr. WILDEY. I think that it is important that we note that there is a process when those channels are jammed. If the cell phone call is completed and goes to 9–1–1, there is a process for overflow that is inherent in the system.

I think that what we were looking at in the incident at Columbine is a volume that is far beyond anyone's day-to-day expectations of a system. I know that there were cell phones from multiple vendors and thus multiple sites being used. I think that we are beyond the realm of normal operability when we have a volume like that. As that day progressed, it was not only an event that people inside the school were making phone calls, it was an event that there was a huge press corps that were making phone calls, police and fire and EMS people on the scene. We were far exceeding any load specifications that would have been anticipated for that system.

So, I think the intent is to address negligence and liability and a term of gross negligence if someone misengineered a system, misrouted, but I think in that event what we were looking at is a system that does perform on a daily basis and was exceeded on that day.

Senator WYDEN. Will our other witnesses give examples of liability issues that you feel would buttress your argument on this point?

Mr. HEINRICHS. Sure. I think you are going to find a natural reluctance to talk bout specific case incidents because, without protection today, it would probably result in a lawsuit.

I think the concern that I have is, as a business person and having experience in public safety, that you want people to behave in a way that is in good faith and doing the right things. We do not want them sitting around spending their mental energy trying to figure out how to avoid being sued. The problem is not the suits that are deserved because people are really acting inappropriately. This is about the nature of our civil process which says once something goes wrong, we just sue everybody. If you do that in 9–1–1, you will suck everybody into court forever. Every incident is a matter of debate at some level.

What we all believe, when you dial 9–1–1, you absolutely want it to work. There is no question. We believe it is the most important thing in the world. The truth is we are using the same system we use for everyday calling. So, what we are saying is the standard of performance has to be super-human for everything we do just to

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catch the calls that we thought were really important. That is not realistic. We are not going to drive that.

So, what we have to do is expect people to operate with good quality service, to put their best effort in, but not create an incentive that actually convinces them not to invest money, not make policy decisions that are forward thinking, that are supportive, but instead try to distance themselves in every way from this problem. That is what I fear.

Mr. WHEELER. What a terrific response. Let me see if I can give you a specific example in a wireline situation and echo the fact that in wireless it is best not to talk about specifics because of the legal exposure.

There was a case that went to the Oklahoma Supreme Court, the Hardy case, a few years ago in which a call to 9–1–1 could not be delivered by wireline because all of the wireline circuits were tied up with people calling to order Garth Brooks concert tickets. Now, the phone company should not be liable for the fact that people are flooding the circuits to see Garth Brooks.

A wireless analogy to that would be that we are driving around here on the beltway and there is an accident. The next thing you know, emergency service personnel, the press, and everybody is on the phone calling their next appointment or their spouse or whatever, and all the circuits get tied up and somebody has a heart attack. But the circuits are tied up because the press are doing live reports. Emergency personnel are summoning more help. Somebody is calling to tell their wife, do not worry, I am OK. Should the wireless carrier be responsible for that kind of a situation? It does not make any sense.

Senator WYDEN. Those are good examples, gentlemen.

Let me just wrap up with one last one. I think I will direct it to you, Mr. Heinrichs, because of your experience in my home State in Oregon. As you know, we have tried to be leaders in the wireless 9–1–1 area. In 1996, Washington County, Oregon held the first U.S. trial of the phase one wireless 9–1–1 system in effect. This means the call-back number and receiving cell site information goes forward and it is, I think, regarded as a major step forward in this kind of technology.

If you were asked where you wanted to be in your industry 10 years from now, we are going to say no dead zone problem, no liability questions, this kind of thing, building on what we have done in Oregon, where would you like to be 10 years from now in terms of 9–1–1 and emergency service?

Mr. HEINRICHS. Well, I think, Senator Wyden, your State in particular has a very strong organization pursuing a coordinated policy of emergency communication. I think if I got to pick where we would be in 10 years, in 10 years people would not have to worry about what kind of phone they were calling on. They would not have to know exactly where they are.

Of these 98,000 calls that go to 9–1–1 every day from wireless phones, we are saving a huge number of lives. Wireless is a huge benefit. But what has happened is 25 percent of those people do not have a clue where they are. In 10 years, we can help those 25 percent too. We can be very efficient in our response and resources.

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From an industry perspective, it is seamless. It is not discriminatory between carriers or between technologies, and it is truly the lifeline. Nobody gets confused. From a company view, I would like to be right in the middle of innovating that technology, and frankly to get people to participate with me in delivering new products and new technology, I cannot have a huge liability thing hanging over their head that is so uncertain, particularly when it is unfair to one of my market groups as compared to the other. We have one that is almost totally protected. We have another that has really no protection. As you know, in a business environment, that is not going to incent people to participate.

So, I would love to see a much purer world where we are all out there doing the right thing for the right reasons, and I think we can achieve that technically. We need to administratively or from a governmental perspective get past these small hurdles.

Senator WYDEN. Mr. Chairman, it has been an excellent panel and I hope we will process this legislation very quickly.

Senator BURNS. Well, thank you, Senator Wyden.

I got a couple of questions. You operate in Colorado. Of course, you operate in a lot of different other States, and on a consulting basis I assume. Is interoperability a problem?

Mr. HEINRICHS. From a 9–1–1 perspective, there are some serious challenges in the 9–1–1 infrastructure that are particularly unique to wireline. In fact, one of the challenges wireless has had is that they have been require to plug into very old wireline technology. The 9–1–1 industry today is working through those issues. The wireline carriers have been supportive. But the signaling standards, the trunking types, the way that these calls are passed actually do create barriers for transferring calls. Today it may be impossible for calls from one metropolitan area to be transferred just across a county line if they are served by a different control office. Those kind of complex network issues are being addressed by the industry, but the truth is the infrastructure needs help and we need to work on it today.

My company does out-source services. So, we are involved really in all the States in the United States in directly providing transaction and routing services in support of carriers. So, we get a pretty clear view of how that is working, and there are some serious challenges. The wireless infrastructure in general is newer and more advanced, particularly in the less populated areas, and it is tough for them to plug in. So, there has been a lot of work. We spent a couple of years on this project, figuring out how to plug the new technology into some of the old technology.

Senator BURNS. In Montana, we established sort of a communications commission. It is not formally called a commission, but it was a committee that was put together, a task force, that coordinates the deployment of all kinds of telecommunications that systems have to be interoperative. In this case, are you finding cooperation with the States very good whenever we start talking about interoperability? Because they face those same problems statewide.

Mr. HEINRICHS. Absolutely.

Senator BURNS. Is there an establishment of some sort of a clearinghouse to make sure that interoperability is dealt with?

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Mr. HEINRICHS. What we are finding is that in some States there is a clear State leadership role, and Montana is an example where there is—and we are starting to work directly, in fact, with that group. In other States we are finding that local governments or councils of governments are the coordinating entity, and they are quite happy with that and they are very successful. In 9–1–1, I would tell you I think that is a politically charged issue whether the local community loses control or not. I have not seen local community controversy be the barrier for 9–1–1 working. Those things have worked fine.

I think what we create, though, is we have created administrative nightmares. We get situations like the letter that Mr. Wheeler shared with us that are truly unfortunate. I do not know the best solution to that. I think it is different around the U.S., and trying to get these coordinating plans together is an excellent way to address it.

I think the other under-served area is rural America frankly. As I am sure you are aware, in many cases rural America is served with wireless phones. We need to drive that service quality up high because response times are inherently longer there anyway because of the distances that have to be traveled. We have got to deal with that.

We also see a number of the very small independent telephone companies on the wireline side are not technologically at the same level as the big carriers. As a result, emergency telephony is not operating at the same standard. When we look at our errors, the problems we have, the metrics we use to measure the performance of the system, we see that those independents are increasingly contributing a substantial portion of the errors, highly disproportionate to the number of records that they house in the data base.

So, there are some serious challenges. I think the National Emergency Number Association has been effective in bringing people together for coordination and standards on these issues, but the telecommunications industry is moving at lightning speed. It is unbelievable. It is unparalleled when you look at it technically what is happening. What we are saying is that government and multiple diverse industries must all coordinate to continue to protect the public trust in terms of emergency telephony. That is a challenge and we need your support to do that.

Senator BURNS. Well, I appreciate that. I want to tell you that once you start—when all the decisions that are made in this 17 square miles of logic-free environment that you are now located in—now go out and try to, say, deal with what I had to deal with as a county commissioner, we centralized our communications for our first responders, fire, police. Then you have got the county sheriff. You got the city police. Then you have got the ambulance services, and then you have got several independent volunteer fire districts that are outside the city limits of Billings. We wanted to bring that all together. It sounds wonderful whenever the county commissioners meet with the city council, and we finally get the sheriff and the chief of police to sit down and talk about this. It works fine until you start down that trail. Then all at once the price of sod goes way up. [Laughter.]

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It is. But I think with patience and maybe with some enabling legislation—we do not want to tip that balance as far as allowing localities to make some decisions that will serve them best, but we also got to understand, like Mr. Wildey there that is in a district and when an emergency happens outside his district, they get redirected calls. Some calls do not get through at all. We have to figure out some way to facilitate that. But those questions are going to be answered on the ground there. They are not going to be answered here.

So, I appreciate your attitude on that.

When Ron said in 10 years where do you want to be, and I said in Meeker, Colorado, fishing. [Laughter.]

Mr. HEINRICHS. We will be there with you.

Senator BURNS. But I thank you for your testimony today. It is very, very important as we move this legislation along.

Mr. Wheeler, you are exactly right. The big part of this is going to be the liability end of it because we live in a different society than we lived in, say, 30, 35 years ago, and it is terrible to operate in an arena of fear whenever we have responsibilities that mean life or death. I would hope that the American people understand that and especially first responders.

Mr. WHEELER. Thank you, Mr. Chairman.

Senator BURNS. So, I have no other questions. If there are other questions that would come from other committee members, I would ask you to respond not only to the committee, but to those committee members. I am sure we are going to leave the record open for a couple of weeks. I am sure other members will have questions, and we will direct those to you.

I thank you for coming this morning. This hearing is closed.

[Whereupon, at 10:42 a.m., the subcommittee was adjourned.]

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