

IRWIN, Bob
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**U.S. Department of Agriculture
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Interview with: [Robert L.]”Bob” Irwin
Interviewed by: Douglas Leisz
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DOUGLAS LEISZ: Well, good morning. I’m Doug Leisz, a Region Five volunteer for the oral history project. Today is February 8th, 2006, and seated with me is Bob Irwin, I-r-w-i-n. Bob’s a Forest Service retiree. We’re in Placerville, California, at the Eldorado Forest headquarters. We’re going to talk this morning about FIRESCOPE [FIrefighting RESources of California Organized for POTential Emergencies]. Bob has already done an oral history of his career, but with that, why, we didn’t get into the FIRESCOPE project, which was just an incredible research, development and application project that changed the way people thought and dealt with fire management.

We’re going to start this morning, and Bob’s going to give us a little bit of brief [information] about his career and then take us right to the 1970 fires and where he was and what he did at that point. Bob?

ROBERT L. IRWIN: It’s interesting that we’re doing this here because I started on this forest in 1947, back on the back side of the Georgetown District for the blister rust control, the Bureau of Entomology. And one thing led to another. I spent seven seasons on the Georgetown District of this forest, and I never worked in this building, but it’s interesting to be here. I was forced into going to college. All I wanted to do was fight fire when I was a young fellow. [Sidney] “Sid”

Mainwaring and George Ramstad—this story isn't in my early thing there—pretty much made me go to college on my G.I. Bill from the Marine Corps. So then I was on my professional track after 1959. I went through three or four assignments and transfers, timber management, assistant ranger, district ranger at Gasquet and then fire management officer on the Sequoia National Forest from 1968 to 1972. That, of course, involved me in the 1970 fires.

I had two of my own at that time, but they started after the real Southern California fires started, and I was on the tail end of priorities for a long, long time, and we really struggled. I had my coordination and cooperation difficulties and problems with the department—or was then, the Division of Forestry, and Kern County and Forest Service dispatchers up the line who didn't want to give me anything because the priorities were down farther south.

LEISZ: So right away, one of the issues, of course, with FIRESCOPE was allocation of resources when you get really strapped, when the cupboard is empty.

IRWIN: Right.

LEISZ: How do you assess that fire situation for potential and allocate resources accordingly?

IRWIN: We had our coordination problems, particularly with Kern County. They were not supposed to do a backfiring job down below us, and they did, and it just almost blew us off the top of the mountain when it came up that hill. But the most relative thing about that was that the governor—and I think you must have had a hand in it, and [state forester] Lou [Moran?] had a hand in it—organized this firefighting resources group to study better ways to tactically use firefighting resources. The TUFF committee is what we called it, TUFF.

LEISZ: That's correct. Actually, Lou and I approached the governor's office and made a suggestion that there needed to be an in-depth review because we knew we could do the job better.

IRWIN: Yes, yes. And I served on the TUFF Committee with CDF ranger Ray Banks, who was a really smart fellow, and he was the chair of that, obviously. And we came up with sort of an early-on, amateur version of some of the incident command system organization. That went on for two years or so, and then I moved to Riverside to work on the FOCUS program.

LEISZ: Tell us a little bit about the FOCUS program. What was that?

IRWIN: FOCUS stood for Fire Operational Characteristics Using Simulation. It was the very first computerized fire planning tool, and it was designed to assist the district fire management officers and the forest fire management officers in the best dispersion of their resources: where to put the air tankers, where to put the helicopters, how many engines to have, how many crews and that kind of thing.

LEISZ: Well, Bob, it must have tied in with the pre-attack fire planning work that was kicked off there in Southern California to—there was so much work done on that.

IRWIN: There was, and it died, Doug. And here would come another division in the way people think and work: Researchers were going after, all after computer stuff. We did manage to get some practical input into that system, and yet our advisory group, which was seven national forests across the country—those guys and research in Washington, hung so many bells and whistles, like, “Well, we gotta have three different kinds of air tankers and three different kinds of helicopters, and they have to build line at different rates,” and poor old—a guy by the name of Fred Bratton, a marvelous computer programmer, was doing the initial attack models and stuff, and it just drove him crazy with all these bells and whistles that they hung on it. When they finally closed the program—by that time, I was working for FIRESCOPE, but when they finally closed the program, it was so cumbersome that the Washington office took it over and began to use it as a financing tool for regions, not for individual districts. So it never did really

get to serve the original intent of what it was all about, but it was a pretty good program until they got to hanging all the stuff on it. And that's another lesson I learned going into

FIRESCOPE: Don't get this thing too damn big, now.

LEISZ: So you went from the FOCUS project into the FIRESCOPE.

IRWIN: Next door.

LEISZ: Right next door. Both operational there at the Riverside lab.

IRWIN: That's correct.

LEISZ: And how did you get moved over from FOCUS to FIRESCOPE? What happened there, anyway? Well, I know part of what happened.

IRWIN: Yes.

LEISZ: The original program manager there probably overextended himself in that job and was having real difficulties in functioning fully with it, and I think it was to a point where it was almost a physical health problem with him.

IRWIN: I won't say a whole lot more than that, Doug. I think you're absolutely correct on that issue of why the first program manager left the program. But there is a quote that he made that pretty much tells the story of the conflicts that he had. He told the fire chiefs at one point, "I'm gonna build you the best goddamn system you ever saw, and if you are too dumb to use it, that's your problem, not mine." And that was a sincere official communiqué at an official meeting.

LEISZ: So anyway, you become the program manager on FIRESCOPE, which is a systems approach using the highest skill of computers at that time in trying to systematize all aspects related to fire management. Were you tooled with computer knowledge at that point?

IRWIN: No, no, I was not.

LEISZ: So tell us about how it was getting into that job.

IRWIN: Well, you know, I'm a lazy sucker, and if I can avoid work, I don't go after it, but there were some really sharp computer programmers in the FOCUS program, and I leaned on them for advice. I got what I needed from them, plus a couple of the contractors.

LEISZ: Mission Research?

IRWIN: Mission Research was [William] "Bill" [Hanna?], and the Aerospace Corporation had Terry [Haney?] working for them. That's an interesting thing in the outline here for the interview guide. About the time that the 1970 fires were actually occurring, the federal government was saying, "Aerospace, we don't want you on this military anymore. We're going to have to shut down some of your military contract stuff." So the Southern California aerospace companies were scratching and hunting for civilian work to do, and here came the fires, and they went to their congress people and Southern California Watershed Fire Council, went to congress people, and that's kind of what funded the push for this major program.

They, again, just like the FOCUS fellows that I knew, Fred Bratton and Randy van Gelder, a couple of other people; I've forgotten their names now, but anyway, the aerospace people were way ahead of the Forest Service in computer knowledge and systems acquisition. Earl Anderson was a contractor. He helped me build the first FIRESCOPE implementation plan in 1976.

LEISZ: The transition for you is challenging considering the complexities of this job. Of course, you've got a number of partners in the FIRESCOPE activity.

IRWIN: Right.

LEISZ: And all of them have their own systems in the sense of their operations, and so one of the big jobs was certainly to get people pulled together and also lean on them to be flexible about

how you might do this in a systems approach that integrated all the others. Tell us a little bit about your experiences with that.

IRWIN: We've already recognized how big that tour was that was ahead of us, and I didn't visualize how huge the thing was going to get, and I don't suppose anybody else did, either. Originally when I came on board as the program manager, the fire chiefs—and we might probably want to say that the fire chiefs were the advisory committee that was required by federal law. I don't know the name of that law. But they had to have an advisory committee of users before our funding could be legally spent. And when I came on board, there was a huge amount of leftover frustration with the previous program manager, and there was a lot of resistance to what I wanted to do, and I kept holding up my hands and saying, "Hey, guys, I surrender. I surrender. What do *you* want to do?" That's why I wrote the original decision process. See how yellow that is? That's a historical document there. That took a while to get through the board of directors. When it finally did, they knew and you knew—you were leading the crew at that time—that we meant that they were going to take an active part in this thing.

Now, in the meantime, the early-on research effort had established what they call the FIRESCOPE Task Force. That was one experienced fireman from each of the agencies involved.

LEISZ: Roughly how many were there involved? Because a lot of folks may not know this.

IRWIN: There were eight of them. Actually there was a fire district up on the Arrowhead area up there—they had a volunteer fire chief, and he originally was a part of this group, and it got too much for him, and he said, "Forget it, I'll go along with the big guys." But the Department of Forestry, which at that time was the Division of Forestry, the Office of Emergency Services, Los Angeles County, Ventura County, Santa Barbara County fire departments, Los Angeles City

fire department, and the Forest Service. Those were the fellows that were represented on the task force.

Terry Haney—we're still in the early stages here. He was still part of Aerospace Corporation. The contract was between [Richard] "Dick" Chase and Aerospace Corporation, but Terry Haney became the facilitator for the task force. It's quite interesting there: The very first thing they had to work on was the terminology. Do we call this guy the fire god, the fire boss? What is it that we call him? Well,—

LEISZ: So organization terminology but also equipment terminology.

IRWIN: Oh, yes. Oh, yes, yes. At one of our meetings for the thirtieth anniversary thing in 2001, [Richard] "Dick" Barrows, who was the representative from the Office of Emergency Services, asked Terry, "Why the hell did you guys work on terminology when there was all this other stuff to do?" And Terry said, "That's the only thing we could agree on." And they could agree, because they'd all had problems, see? The guy wasn't the fire boss. Even in those days, he'd go off on medical aid, rescues, stuff like that. It was an incident that this guy was dealing with. Bingo: incident commander. Everybody bought into that. Early on—the very first organization chart did have a fire and rescue operations chief. They said, "Forget fire and rescue, because there's all kinds of other stuff: earthquakes, hazmat, this and that and the other thing." So it changed to operations chief, which it is today.

LEISZ: It is kind of interesting, because in the bill going through Congress, one of the things that got added initially was to deal with fire, coordinating fire resources, and the element got added, "and other emergencies," recognizing that at least for Southern California, it was not uncommon to have floods, earthquakes—

IRWIN: Yes, right.

LEISZ: —as well as fires. The initial oversight group—there was a panel, and that panel—

IRWIN: Technical panel.

LEISZ: Well, no. No, there was a top organization panel for expenditure of funds.

IRWIN: Oh.

LEISZ: And that was entirely Forest Service people.

IRWIN: Ah!

LEISZ: Chaired by Research, so I was involved in that. And you had a representative actually from Research in the Washington office for a limited time, but that was kind of to get a feel for how to direct funds to support, and that evolved, as you came along, into finally a board of directors. The first part of that, why, the PSW research director chaired it, and then 2 years later I stepped into the chair role. But that was a group that probably had—if you combined all the financial assets of fire, they probably were looking at a big proportion of the entire budget for the United States as directed to fire.

IRWIN: Yes, yes, yes.

LEISZ: So it was a big group. How about the organization egos that you found in this?

IRWIN: [Laughs.]

LEISZ: Sometimes we don't talk about that, but they're there, aren't they?

IRWIN: Well, they're there. They are the most important. I got three or four different subjects going around in my head, and I want to answer your question, but there are some other things that I want to say.

LEISZ: Go right ahead.

IRWIN: The first decision process, the rough draft of 10/14/75 that I've given to you for copying—that's the first time that what had been called the technical advisory group of fire

chiefs—I called them the board of directors, and that’s the first time that terminology got into that thing there. And that took a while, because they were still stuck in that technical directors thing, and they were used to getting told what was going to happen instead of having some input into what *should* happen.

The egos? Boy, the guy that was the fire chief for Los Angeles City had a monster ego.

LEISZ: In a way we can understand that. He had a large organization, a huge budget, and—

IRWIN: And really national attention on his department because it *was* so big and had so many problems.

LEISZ: Actually he had international attention.

IRWIN: Yes, yes. And all those fire chiefs, of course—they had to climb up a political ladder as well as a career ladder, which was a real difference between what you and I had to deal with. I supposed we all had a little politics to deal with, but not to the extent that those guys did, the maneuver the chief’s job and that kind of thing. And so once they achieved that, why, their ego just had to blossom. Even the smaller departments. Stanley “Stan” Masson from Ventura County, who was a wonderful guy, a wonderful supporter and really not into the big-guy politics stuff—he still had his way of really telling his people what the hell was going to happen.

LEISZ: So we had organizations that had established practices and policies, and with a large organization, whether it was CDF at the state level or county level or a city like Los Angeles—

IRWIN: Or the Forest Service.

LEISZ: Or the Forest Service, why, you really had, in the struggling early years of FIRESCOPE—kind of the picture is, “What are you going to do to my organization?”

IRWIN: Yes, yes, yes.

LEISZ: And “I’m not sure that I can buy into all this if you’re going to radically change the way I think and act and function.”

IRWIN: Right. And one of the key parts of that was that all of the urban fire departments used the badge or the number of bugles on their shirts to determine the position that that person would hold on the fire. It certainly wasn’t like the Forest Service, with red cards and qualifications and go to so many fires every year or you lose your—

LEISZ: Talk a little bit more about that, because this is a real difference in the Forest Service. You might have a forest supervisor or a district ranger that isn’t qualified in fire for any significant line jobs—

IRWIN: There’s a bunch of those out there now.

LEISZ: But even in the early years, this was somewhat true. But in a fire, why, we followed the red card qualification for who would have ended up in charge, didn’t we?

IRWIN: Right.

LEISZ: And the state organization and the county and city organization had the battalion chief labels and other labels of their positions, and they automatically in charge when you got to an emergency situation.

IRWIN: Yes. The CDF had a quasi-Forest Service system at the time.

LEISZ: That’s because a lot of our folks—

IRWIN: [Laughs.]

LEISZ: —were in the CDF.

IRWIN: Yes. But there were some tremendous problems in resistance, organizational resistance from the people in the urban fire departments, who didn’t like the fact that they didn’t really have the qualifications that some of the people working below them did.

LEISZ: Yes.

IRWIN: That created some slow-down on how we dealt on a people basis with the program.

LEISZ: Let's pursue that a little further, because the incident command triggered some things: as you mentioned, terminology, but it also triggers the thing of if you're going to have an incident commander, you're going to have to have certain qualifications.

IRWIN: Yes.

LEISZ: How did you approach this part of it?

IRWIN: [Sighs.]

LEISZ: As I remember, there were training standards that were adopted.

IRWIN: After a long time and struggle.

LEISZ: Why did you have to have training standards, then?

IRWIN: Because the system was going to be modeled on the highest levels of performance that we could manage to get from anywhere, from anybody. That was part of the commitment of the task force and Terry Haney. Terry, as I keep saying over and over and over again, was the mother of that process. And he had to mother that process to start with, with the task force. Those guys, after working with Terry for a year or so—the guys on the task force—they'd get shot for Terry if they had to, because he's such a wonderful guy, and they could see that they were going to make some changes in the way the world turned if they went through with this ICS idea and the MACS idea, Multi-Agency Coordination System. They began to see that, and when we got the decision process a little further along—

Well, I interrupt myself, but I'm going to do it anyway. One of the problems when we had the task force at the bottom and the board of directors, the former technical team, at the top was that the chiefs never talked to the battalion chief that was on the task force. They'd be lucky

if they passed them in the hall and said, “How you doin’?” “I’m going to a task force meeting.” It wasn’t until I practically twisted everybody’s arm to get the operations team established—that was the people like [Richard] “Dick” Millar and [Richard] “Dick” Barrows, other—

LEISZ: John Hastings.

IRWIN: yes.

LEISZ: CDF.

IRWIN: Actual operations people, not chiefs and not firefighters, but the actual operations people on the operations team, and then the task force reported to the ops team. The ops team then reported to the board of directors, and the languages took care of themselves, then.

LEISZ: But if you—I think you’re talking multi-agencies again, and you’re trying to put a command system together, which you’re doing for an incident. You’re liable to have a mix of agencies, aren’t you? So—

IRWIN: I’m sorry, I didn’t hear that.

LEISZ: You’re putting a multi-team together for a fire.

IRWIN: Yes, yes.

LEISZ: You’re going to have mixed participants from agencies, and one of the concerns, as I recall, was that they have to meet standards that are uniform if they’re going to be an incident commander, or whatever job they’re going to hold, they must be able to function across agencies.

IRWIN: That was correct. But what the agencies did—now, I can’t remember any part that I played in that, but I must have done part of it—what the agencies did was to say, “Okay, until we really get this organization started and oiled and operating on in operational basis, we will accept what you say this guy’s qualifications are.” In other words, at first there wasn’t the qualification requirements that there are today. And that’s the only way it could have worked.

LEISZ: The process has evolved, is what you're really saying.

IRWIN: Yes, yes.

LEISZ: And it evolved through design, and then kind of [setting the qualifications aside, and then feeding back and saying, "You got to change this because it's just not going to work."

IRWIN: I'm going to sidetrack again on two issues that are really important to me, as I look back on FIRESCOPE. One of them is what former Senator George [J.] Mitchell said when he was talking about his success in bringing peace to Northern Ireland, having the peace plan signed, that original one. He told a story about getting together with all the players every morning to discuss how they were going to go about this plan, and every morning, all these guys brought in newspapers and they start criticizing their neighbor. "I didn't say that." "You said I said this." And they fought over that, and finally Mitchell said, "Look, guy, stop this. Don't bring any more newspapers. When we come here in the morning, if you want to talk, you talk about your family, your kids and your dogs, and that's all I'm going to allow." And he said, "You know what? After about a week of that, trust crept in."

LEISZ: So this was a big item in FIRESCOPE.

IRWIN: It was a big unconscious item that Terry nurtured.

The other thing: I just saw a young Army colonel who's responsible for turning Iraqi police people, and he said, "You know, we can bring them all the organization models that we have in the United States about how to be a cop. We cannot bring them the culture, and they have to work together to develop their own culture." And that's precisely what happened with the FIRESCOPE team.

LEISZ: Well, let's move on down the process some. Let's talk a little bit about—there was an early fire—I think it was on the Angeles.

IRWIN: The Pacoima fire.

LEISZ: In which ICS was tried.

IRWIN: That's correct.

LEISZ: How about talking about that? This was really the first time of taking it to the field for full implementation.

IRWIN: That's correct. [Richard] "Dick" Montague was forest fire management officer on the Angeles. We had already decided, through the decision process, that the Angeles, part of Ventura County, part of L.A. County, L.A. City, and I think part of the San Bernardino Forest would be in a thing we called the "core area" for testing. And everybody had to be in line, and lined up. They had a big checklist about what had to be happening before we said, "Okay, this is an ICS test fire." Montague ran that marvelously. They had problems. A lot of the problems were skips or misses in the way the organization was put together and should be communicating one to the other. Those things all got taken in on evaluation sheets, and then the task force went to work and corrected those over time.

War story. Not the Pacoima Fire, but a fire a little bit later than the Pacoima. I don't know the name of that fire. That was during a major bust in 1979, where we had thirteen, fourteen, fifteen fires going on at the same time under Santa Ana conditions like they've got going on down there yesterday and today. A fellow by the name of [Ronald] "Ron" King was operations chief for Los Angeles County, and Ron and some of the other operations chiefs were out at the operations coordination center. I put them in a Beech aircraft, the whole bunch of them, and flew them over all the fires. They got over this fire on the Angeles, and they knew— Dick Millar was in there somewhere, and he knew that the Angeles was hurting for engines, and when they flew over there, down here in the [Acton?] country, there was twenty or thirty L.A.

County red fire engines parked. And Ron had been one of the resisters: “I don’t want to change. I’m happy with the way things are going.” He got on the radio, and he chewed those guys out down there. He said, “What the *hell* are you doing down there sitting on your butt? Get up the hill. Get those engines up to the Angeles.” That kind of thing is what brought the group together.

Another famous story that I love because I was there when it happened: A communications group was meeting. That was another result of the decision process, to create a communications group. And they were just coming together, and a guy from Ventura County or the City of Pasadena or somewhere, was sitting there glum and saying, “Damn, I got some radios. If my chief would let me buy crystals, I could put twelve radios out there more than I’ve got now.” And the guy from L.A. County said, “You just need crystals?” “Yeah, I need crystals, but my boss won’t let me buy them.” And the guy from L.A. County says, “Hell, I’ll give you crystals because we’re changing to the multi-channel programmed radios.”

LEISZ: Talk about some of that, the hardware part. You got into communications, so describe the problems in communications even between the eight partners there. If you expand that in Southern California, you soon have forty participants.

IRWIN: Yes.

LEISZ: What about that? How did they communicate in emergencies.

IRWIN: The first thing that happened—well, prior to FIRESCOPE effort, sometimes a guy would loan his opposite number one of his Handy Talkie radios so they could talk back and forth, and that’s the first thing that we did in the FIRESCOPE program, was arrange to make loans across the way. And [Arnold] “Arnie” Masoner—Arnie with his skills—he said, “We could put together a whole frequency-sharing agreement,” because, you know, he was the budget

and finance guy. He said, "I can make up an agreement where we can actually give mobile radios to one another, not just the handsets." And [Charles] "Charlie" [Columbo?] was CDF's communication officer, and he and Arnie teamed up and made that frequency-sharing agreement, and that was the second step after Handy Talkies. They actually loaned mobile radios. And then came along John Warren, the research communications specialist from Missoula. He came down and went through the communications issues with Arnie and me. He said, "I can put out a test contract and see if anybody will come along and give us a multi-channel radio. And a little outfit by the name of [Wolfsberg?] got the first contract, and they came along with a twelve-channel, programmable radio.

Well, no, that's not what happened first. The first thing that happened was I got the brilliant idea, because I had done so much air attack—I knew you had 1,900 channels on an aircraft radio, see? So I told Arnie and the guys, whoever it was, "Buy some aircraft radios. Put those in the mobile rigs." "Oh, oh, no, sir." [Chuckles.] "FAA rules do not allow that." [Laughs.] And we had to turn back all the aircraft radios.

LEISZ: You had basically that same problem between agencies, didn't you?

IRWIN: Oh, yes.

LEISZ: Because you couldn't legally carry the other organizations' radio channels under FAA rules without getting—

IRWIN: Until Arnie came up with the frequency-sharing legal agreement.

LEISZ: Yes, and so there was some kind of behind-the-scenes work that took place there, because there were some—

IRWIN: Oh, yes.

LEISZ: —Forest Service channels in L.A. County equipment and vice versa.

IRWIN: Oh, yes.

LEISZ: But it was all on the QT.

IRWIN: At first.

LEISZ: It wasn't legal.

IRWIN: Yes.

LEISZ: So some real breakthroughs on communications.

IRWIN: Yes. Oh, I know what I was going to say. Today departments across the country are separating again. They're back almost in the same position that we were in 1975-'79, not being able to talk to one another. We see that when we see the reviews of [Hurricane] Katrina and—I don't know how they're going to resolve those problems, but if people would just plan together, they could probably get the job done like we did.

LEISZ: And then that requires real discipline, doesn't it?, to not tie the radio channel up when you don't have an absolute need to communicate. Because no matter how many channels you have, people can talk—

IRWIN: You can use them.

LEISZ: They can use them fully—

IRWIN: [Laughs.] Talk the fire out.

LEISZ: Yes.

We haven't talked at all about the MACS.

IRWIN: Multi-Agency Coordination System.

LEISZ: Yes. Why don't you talk about that? That had some real difficulties in coming along, didn't it?

IRWIN: It did, in part I think because the ICS was not quite yet fully matured, and people were paying more attention to that sometimes when there'd be a little glitch in the ICS get-along.

They'd say, "Well, wait a minute, that don't work. Why should this work?"

LEISZ: What was the plan supposed to do?

IRWIN: MACS was supposed to provide a single point for resource allocation and coordination from all—

LEISZ: Irrespective of agency.

IRWIN: Irrespective of agency. And I saw the MACS design, and we tried the MACS by not having guys leave their home stations. These were the operations officers, operations chiefs in the decision process that were going to be MACS representatives during these major fire busts. It just didn't work to have guys stay at home and try to make multi-agency coordination moves with the OCC, the dispatchers there. That's one of the reasons I put those guys on that airplane that time: get them together, and let's get them up there so they can all see the same thing. Well, once they did that, then they were willing to come together at the operations coordination center there at Riverside CDF headquarters.

And then [Michael] "Mike" Scherr, who worked for the OES and was their task force member and also sort of a quasi-operations team guy—he put together a list of priorities, and I came along, and I said, "Well, wait a minute. Here's your priorities. How are you going to manage those?" So then we both worked on some forms. Okay, I've got so many fires going on my jurisdiction. I've got so many people. I need so many people. Let's get it all on forms, like ICS forms, only these are MACS forms, and then all the guys sitting around the room there can look at all the maps on the wall. We did not have computer representation of the maps; we had

hand-drawn maps, and Mike had a couple of assistant dispatchers that would just draw maps till hell wouldn't have it, to depict what was going on. And that, I think, worked quite well.

LEISZ: As the MACS operation was set up, I remember part of the issue when we were looking for a location. There was concern that if a single county had it or a single city had it—and we had offers from both of those entities to house it. Of course, right away it raised a question with the others about a certain group was going to capture it. To me, I was really tickled because one of my very good friends in CDF, [Joseph] “Joe” Springer, was the deputy there in Riverside, and he actually called me and volunteered to give us a warehouse there, that he'd moved their stuff out and dedicated a warehouse there so we could have a MACS location, which, you know, is an indication that here somebody was willing to go an extra mile to push the project along. And we still had the difficulties, though, because any of the agencies—they've got a zone they're responsible for [for] files, and they've got resources to try to care of their suppression needs, and then you have an organization that may decide to dispatch their resources even outside their protection boundary because they're the most logical unit. Now, tell me about how you convince people to do that.

IRWIN: First of all, let me tell you about Joe Springer. Joe Springer and I went clear back to Del Norte County, when I was ranger as Gasquet and he was there at Crescent City. He used me on a couple of his fires, because he was running short of people sometimes, so we had a really good history. Joe went back with me and Clyde Bragdon and briefed the national wildfire coordinating group in Washington, and when he saw—the same thing with Bragdon—when those two guys saw the interest from the wildfire coordinating group in getting something done, that made a lot of changes right there. I was with Joe—Arnie and I were with Joe when we went out and looked at his warehouse, and he almost cried because he had a beautiful warehouse there,

and originally we only asked him for half of it, see? And he said, “Am I going to have to give some of these supplies, hoses and hand tools and stuff like that—I’m gonna have to distribute those out to the ranger districts.” [Laughs.] And he didn’t want to part with his warehouse goodies.

You asked a question about how do you get guys to send resources way outside.

LEISZ: Well, even to let somebody else dispatch their resources.

IRWIN: Well, that never happened during my time.

LEISZ: [unintelligible].

IRWIN: The dispatch always had to be approved by the sending agency. Darn it, I really can’t give you a correct answer that I remember absolutely about the resource stuff.

LEISZ: I remember a discussion we had a one point in one of our board of directors sessions, where the chiefs pointed out, “You’re going to have this MACS center, and we’re not going to have somebody there all the time from our department.”

IRWIN: Oh, yes.

LEISZ: “And so when a fire occurs and there’s initial assessment and MACS knows where all the resources are, there’s going to be need to dispatch somebody right away. And so what are we going to do to make sure that we’re covered in that process?” And that’s been—as I read the final report on FIRESCOPE, that was one of the things that really hung up the MACS full application without having the sense, “I’m going to get the chance to approve every time any of my resources are dispatched.

IRWIN: Yes. I can’t remember when it was, but we went to four different modes of MACS operations. The first one was just low-level—yes, people were sitting there, waiting for the fire call to come in. Mode two was—I can’t remember, but it was something a little bit more, like

two neighboring agencies were involved with fires, either the same fire or multiple fires. And then Mode four [sic; three] was everything's gone to hell: We've got major fires, major bad weather predicted, bad weather going on and that kind of stuff. And mode four was when you finally had people move into the operations coordination center, into the MACS dispatch room.

LEISZ: Now you see this practiced really all over the region, particularly with CDF and Forest Service. They have a joint dispatch—

IRWIN: Oh, yes.

LEISZ: —center. And that was true early on in the Lassen Forest with BLM and the Forest Service, the Bureau of Land Management. So that can be done with two agencies. It gets difficult if you try to blend too many into a single operation for dispatching. And I know that the MACS—I know in the final report for FIRESCOPE, it shows only 50, 60 percent achievement of [cross-talk; unintelligible]—

IRWIN: Yes, yes, yes.

LEISZ: —the objectives.

IRWIN: They went on after our part of the program closed, and they did more than the 60 percent shown there. That was just—

LEISZ: That was in 1982.

IRWIN: Yes, that's when I left.

LEISZ: Yes.

IRWIN: Unified command was the key part of both ICS and MACS, and to be in a unified command, that fire had to be at least part on your jurisdiction, for starters; otherwise, you became an assisting agency and not part of the unified command. Unified commanders had to

have the authority to assign people and pay bills. That was one of the qualifications of a unified commander. That blended, to some degree, the MACS and the ICS.

LEISZ: What about some of the other outputs of the FIREScope project? There became a role for OES, didn't there?

IRWIN: Oh, yes.

LEISZ: As products, things were produced, like an ICS or whatever, then there had to be an agreement for maintaining and being the keeper of those.

IRWIN: Right.

LEISZ: Talk a little bit about OES in that light, because that was very interesting and a new role for them.

IRWIN: Yes. I'm looking through the program report now, because in here somewhere, it tells where—

[Recording interruption]

LEISZ: Well, we took a short break here with Bob Irwin, and now we're back, and we want to talk a little further about how the FIREScope project was managed as to—what happened to the elements as they were produced? Bob, do you want to talk in some detail about that?

IRWIN: Yes, I'll try, Doug. I think the first thing to say is that we had just—like, we had no other process for anything in the beginning. We didn't have a process or a procedure for how to hand stuff off, who was going to keep it, what the document control was going to be. None of that stuff existed. It all had to be worked on, and the task force and the program office—myself and Arnie and Jerry Monesmith and later on Earl Anderson—we all struggled together to come up with processes that would work.

The first criteria [sic; criterion], and the one that was very difficult to get past, was that the board of directors would have to sign off on anything that the task force and the rest of the decision process said was a completed product and now ready for production, quote unquote.

LEISZ: Let's take an example. Like, the ICS. Is that one—

IRWIN: That's certainly one of them, but the process that we're talking about wasn't developed by that time. One of the things that we struggled the most with—and that's after you went back to Washington—was the computer system: Who's going to run the computer system? I got in deep hot water with several of the board members because I was watching the federal agreement that bought the computer in the first place. My interpretation of that thing said we cannot turn the computer over lock stock and barrel; we could turn the products that are used on the computer over to other partners. That's fine. That's part of our chore—

LEISZ: Or the manuals.

IRWIN: Yes, yes.

LEISZ: Training manuals or whatever.

IRWIN: Yes, yes. Right. But we cannot give the physical machine, the prime computer—we can't turn that over and forget and say, "Well, that belongs to OES. Now, goodbye, federal money." We couldn't do that. We got in some terrible struggles over that.

LEISZ: But by 1978, the OCC manager position was filled, wasn't it?

IRWIN: Yes.

LEISZ: And so what role were they going to play?

IRWIN: [Chuckles.] We didn't know that, either, Doug. [Laughs.] The support service manager, which was a combination of the support and service functions of the logistics chief in the ICS—we modified that to be both, support and service manager for the operations

coordination center at Riverside CDF, and we developed his job description as we went along. You know, there was a lot of “givens” in that. You provided support, you provided supply and that kind of thing.

LEISZ: It does make a lot of sense, it seems, that, rather than any single agency having the responsibility for maintaining the program elements, that you put them in one place, and OES interfaces with all the agencies. And so that even ties right in with the continuation of FIRESCOPE finally being handled by OES, doesn't it?

IRWIN: Yes. If I follow you, it does, yes. See, the one other kind of a lucky star that was shining down on us all the time was the fact that the Office of Emergency Services—Dick Barrows was the fire and rescue chief for the Office of Emergency Services, and he was a staunch believer in the master mutual aid agreement that almost every fire service—big, little or indifferent—in California had become a signatory to. That made the OES a real prime candidate to manage a fire system that was supposed to improve fire coordination.

LEISZ: As different elements were produced, anyway there's a house now for them.

IRWIN: You bet.

LEISZ: Somebody to take care of them, manage them.

IRWIN: Right.

LEISZ: Probably deal with updating them all the time.

IRWIN: Oh, yes, yes, there's a whole document control system that is the responsibility of the OES. At the time we were planning that thirtieth anniversary, OES had a woman down there in Riverside who was really competent and darn, she died from some kind of blood cancer, lupus or something, and there was a little jolt after that in their document control business. But she had done a marvelous job of putting that all together.

LEISZ: Let's pick up at the point—and there's a pretty good flow of products now. There was a lot of work done in mapping to get standardization there, and we got some of the infrareds, and there was [sic; were] mobile command centers producing—beginning to get more into applications, so how did the application part start to go? It's after 1978, this period. Tell us about that.

IRWIN: Mapping was a key product, and we had some trouble with that because Michael “Mike” Renslow, the Region Five cartographer who was my helper in FIRESCOPE, was assigned to me, a brilliant guy. He came up with a good system of identifying even down to a ten-acre block, where the fire was, where everybody could tell, or you could dispatch air tankers to that, on an azimuth, from whatever base they were. But the map packages were horrendous, and there was a legitimate resistance on the part of the firemen in the fire engine and certainly in the air tankers. [Chuckles.] They didn't want to pack that big sack of maps around. And so for a long time, the mapping products were not really adequately utilized. With the advent today of computer mapping systems that can get you to your girlfriend's address in Azusa [chuckles], those issues are pretty much taken care of. I don't know how far they went with putting Renslow's geolock locator system in the maps today in the fire service.

LEISZ: But at least at the time of FIRESCOPE, why, the different agencies had different map bases. We did not have common maps—

IRWIN: Oh, yes. Oh, yes.

LEISZ: —orthophoto maps.

IRWIN: Oh, yes. Big outfits even like Los Angeles City and Los Angeles County were using Thomas Brothers maps.

LEISZ: Right. And here at this point, we bring another agency in to do it, because the U.S. Geological Survey has the map responsibility for the nation.

IRWIN: Yes.

LEISZ: And they had begun a project on parts of Southern California. We went to them and requested that they give particular attention to the core area in completing orthophoto mappings for that, and actually put some funding in, and USGS responded very strongly to that. That was a little bit ahead of the technology where you can use the computer to show you a map on the screen—

IRWIN: Yes, yes, yes.

LEISZ: —and take you right there street by street.

IRWIN: Yes.

LEISZ: But that was a great gain. So you had some tools now, and you had a fire, too, that you applied the incident command system to, and you modified the system some from the experience, and then you started on more widespread application. How did that go? Was it tough going?

IRWIN: It was really tough going because at the point where we had created and tested and really implemented the incident command system and we had tried and developed and gotten a reasonable amount of approval for the MACS system, the rest of the stuff that was left was research products. I have a chart here that I'll give you to copy, but you asked before about the complexities of the interrelationships.

LEISZ: Talk to that a little bit, Bob. Describe some of that.

IRWIN: This is a chart that I sent to Steve Dunsky as a part of the package that we will copy later today. This is interrelationship of technologies included in the FIRESCOPE design. We

start with remote sensing and the USFS, USGS mapping effort that you had just referred to. There was also the University of California at Santa Barbara process that I've forgotten now about, but that was a piece of it. Orthophotos, maps—all of that had direct field application. Vegetative data, which we'd never really got mature in our research. Terrain data, which we had, but the people that were responsible for doing fire weather predictions were not satisfied with the accuracy of the DoD, the Department of Defense terrain data. Some were off by fifty feet, and they said they were only off by three and that kind of thing. Weather stations. The field use of current data was supposed to blend into wind models, and the wind models never got finished during my time.

LEISZ: You needed all this stuff to predict how fast and how bad the fire might become?

IRWIN: That is correct. That was all part of the fire prediction requirement or assignment to FIRESCOPE.

LEISZ: The systems approach to it said you need to know this before you start to allocate resources.

IRWIN: Well, either that or just like we used to. It fell back to guessing like we used to, because you're not going to sit there and wait for research.

LEISZ: Of course, the fire spread models have become more sophisticated now. But they still take the elements that you were just talking about—

IRWIN: Yes.

LEISZ: The terrain, the vegetation—

IRWIN: Yes. You see, in this chart that I made out, aircraft tracking is a piece of what could have become if all these other things had been completed and matured. Hazardous materials

programs, incident records, cost accounting, the mapping stuff. That's just one example of the complexity of all of those things.

LEISZ: You mentioned the cost accounting. Now, there were some difficulties, weren't there, in trying to figure out how do we allocate expenses as we get into operational fires? At one time, we had the mutual aid agreement

IRWIN: Yes.

LEISZ: And we'd go through the first period there and contribute, but beyond that, we'd expect payment. Now, when you're mixing all these units together in fire, multi-agency, what are you going to do to keep track of the fiscal integrity here for each agency?

IRWIN: That's why the position of finance chief was created. Initially some of the agencies, like Ventura County, being a small agency—they said, "We don't need a finance officer on our fires; we've got a clerk here in the office." Well, that was over with before I quit because they finally decided, "Oh, yeah, when it gets big and we start using air tankers and we start ordering sleeping bags and this and that and the other thing, we better have somebody there on scene counting them," you know, and so then they finally came along and went with the finance officer also.

Once again, I wish Arnie was here. He was key—he wrote the manual for ICS finance officer.

LEISZ: I'm going to pick him up at a later interview, so we'll get to him.

IRWIN: Yes, yes. Be sure and remember his contributions to that, and to the people.

LEISZ: Let's turn now to implementation. So you haven't got all the products completed—

IRWIN: That's correct.

LEISZ: —from the design, but you have a few to start applying what you know works.

IRWIN: Yes.

LEISZ: So how did you go about this?

IRWIN: Well, Doug, it was already moving. The momentum was there after we saw—Vice President [Walter F. “Fritz”] Mondale came out to the 1980 fires, and he was just blown away with the effectiveness of the OCC, and after he was there, we had some Army guys, real honest-to-God Army, not Reserve or National Guard but Army colonels came out to see how this operation was working. There was [sic; were] about four of them, and at one time or another during our tour of the OCC and our explanation—Mike Scherr was there, talking about MACS, and Arnie was there, talking about communications and stuff like that—all four of those colonels sidled up to me and said, “Okay, this is very nice, but who’s really in charge?” And every one of them said that same thing. See, they could not believe that a process that everybody agreed to was—

LEISZ: Was driving it.

IRWIN: Yes, yes. And that truly is it, Doug. That’s why [voice cracks]—I get emotional about that, see?

LEISZ: And I can understand why, because, I mean, you put a number of years into this effort.

IRWIN: Seven and a half.

LEISZ: Seven and a half years.

IRWIN: Yes, yes.

LEISZ: And I know there were difficulties in the context I had. One of those just is part of it. One of the times I was going down to a board of directors meeting there in Southern California for FIRESCOPE, and Lou Moran and I traveled together.

IRWIN: You told that story.

LEISZ: And Lou said to me that he was having some real resistance within CDF because people were grumbling about organizational terminology was going to change and you were going to have to re-learn what various tools were called, including certain tankers with certain configurations. You were going to have to undergo new training, and you were going to have to be certified in order to function, and he was getting a lot of static, and he just wondered how the Forest Service was doing at the time. I certainly had some discussions with people about that, but I'll have to admit I was fairly direct in people understanding that we were going to do it. And so I probably didn't hear all the dialogue of resistance. But you probably picked up more at your end of the game. I know that other people in the fire organization have shared with me that there was resistance and a feeling that it was no longer going to be the old Forest Service fire organization. So share with us some of your feelings, and some of your experiences here.

IRWIN: One of the things you gel [sic; jog] in my memory just now is that where I sat, those changes were not that severe. I mean, they were to the guys in the fields because they were going to have to do the changes. I would always point out, "Look, you've got to train the new fire people for forty hours. That's not going to change with FIRESCOPE. Maybe the paper you use to be your instructor guide and what you tell those students is going to change, but the time, the effort isn't going to change." It was the same thing with almost every change that was involved in that. The finance chief job, for instance—that was kind of new but not totally new in the Forest Service and CDF. It was in the urban fire departments.

LEISZ: But you had five years to adapt to the changes, and it involved some of the organization folks to say, "Here it is, you've got to apply it."

IRWIN: Right. But even that went slow [sic; slowly] because, remember that [Kenton] "Ken" Clark wrote—and I don't think you were there then; I think that was Zane Smith. But Ken wrote

a thing called “Gear Up” or something like that, which was: Here’s how we change. Here’s how we change. And this year, you’re just going to do terminology. That’s all you’re going to do.

LEISZ: I did catch an interview on FIRESCOPE with Ken Clark.

IRWIN: [Laughs.]

LEISZ: I did bring that up?

IRWIN: Yes. Yes. I had shared some of my thoughts with him before he did that, and I was really satisfied with what he did because the direction was right there. “Yes, go for it. This little change right here. That’s it.” You know, people have always said that the most successful changes are made at the margin, and that was the margin.

LEISZ: So did you feel there was resistance with some of the county-level organizations or the City of L.A.?

IRWIN: I went through a whole two years of organizational development work, courtesy of you and the GETA [Government Employees Training Act]. And I understood, more than I remember right now, but I understood a lot of the dynamics of resistance to change. That stuff didn’t worry me. What worried me was about continuing the funding, moving to the completion of this design that I felt really responsible for, and I couldn’t make it happen. That was tough Jean’ll tell you that.

LEISZ: Yes. Going to the end of the project and putting together the report, where did you go from there in your career with the Forest Service?

IRWIN: I retired.

LEISZ: At the end of FIRESCOPE—

IRWIN: October 15th, 1982.

LEISZ: Nineteen eighty-two.

IRWIN: I had already had my firefighter retirement approved, and there was nothing I wanted to do in the Forest Service after that.

LEISZ: That was kind of a climax of achievement and dedication, and you probably were pretty worn out.

IRWIN: Yes, yes, yes.

LEISZ: Tell us a little bit about that, because when you're the crusader, with leading the change, you pay a price. Tell us about that.

IRWIN: [Sighs.]

LEISZ: It's a physical drain, a mental drain.

IRWIN: A drain on my family.

LEISZ: And a drain on your family.

IRWIN: Jean got to point where she disliked the idea of that program.

LEISZ: Yes.

IRWIN: Ouch. She didn't stay there.

LEISZ: Well, it becomes your life, doesn't it?, when it's this involved.

IRWIN: Oh, yes. I never have been a person to really lose sleep over anything except Santa Ana winds. [Laughs.] I used to lay [sic; lie] awake during those. But—

LEISZ: But you got to feel that your efforts were building to achieve something.

IRWIN: Yes, and that goes back to something we were talking about a little earlier that I wanted to say. When I did the audiotape with Mike Renslow that I sent to the museum, we talked about this dynamic of people trading radio crystals, coming up with a finance agreement, doing this and that and the other, developing ICS, using the geolock system. The momentum that people

built amongst themselves is what carried that program. I term that “turning the gorillas loose.” And we did that, and the gorillas turned themselves loose.

LEISZ: You know, part of that, to me, is that the project was able to capture people and tell them it’s okay to think outside the box.

IRWIN: Yes. Yes.

LEISZ: And you can use your creativity and imagination, and the key thing is to keep your eye on the objective, is what we’re trying to do.

IRWIN: Yes.

LEISZ: And forget about impairments that you may feel that are organizational things or even fiscal things; we’ve got to find out how to deal with those. So part of it was setting up and operating culture that allowed people to think expansively, wasn’t it?

IRWIN: Yes. And I think—once again, I go back and plug Terry again. Terry just scattered seeds of that independent thinking. I don’t think Terry ever told anybody in his whole life what they had to do, but he made that arena.

LEISZ: But we wore people out in that project, didn’t we?

IRWIN: Yes, yes, yes. Yes.

LEISZ: You’re certainly one of them, but some of the researchers as well just gave all they had to it. It is a tough job to think through and stay through such a widespread organization shift and a thinking process to change that to the point where you think more collectively. Now, when did you start to see the trend in applications of FIREScope to other emergencies?

IRWIN: Oh, pretty early on. The board of directors, once they really believed that they were a board of directors—I offered to rewrite the FIREScope charter, because the original FIREScope charter only said command and control to improve fire operations in those

Southern California counties. And I'd been hearing from everybody, task force on up, "We've got to design this system to handle the Volkswagen Fire and the flood and the earthquake, and it's got to be that broad." Well, I couldn't do that under the original charter. There's one place where John Chaffin stood up for me. He said, "Okay, go ahead. Rewrite the decision process, and put in 'all risk.' Anything the fire departments have to deal with is okay for this project." And we did that, and it took a year and a half to get the damn thing, the new charter approved, but in the meantime we were going ahead with planning as though it had been approved. That was a cost to me. I don't mind thinking outside the box. I don't want to be acting outside the box [chuckles] when it comes to the legal stuff. But I did it. And it was worth it. And I knew if there was a stink about it, that I had a hundred guys on my side, see.

LEISZ: As you went into retirement, you've stayed in touch with FIRESCOPE, didn't you?

IRWIN: Oh! Well, the first thing I did was go to work for Terry Haney. He'd worked for me for seven and a half years, and he then had a contract with the Southern California Earthquake Preparedness Project.

LEISZ: What was Terry's job at that time?

IRWIN: He was helping them plan for earthquake response.

LEISZ: Who [sic; Whom] was he working for?

IRWIN: The Southern California Earthquake Preparedness Project, SCEPP. The USGS had come up with scenarios about what would happen in an earthquake, and there was another guy, a guy by the name of Whitson, from UC, Berkeley, I think, a professor, who had said, "Boy, you guys are all wrong. The world's going to go to hell in a hand basket if you don't do something different." And SCEPP was caught between USGS and Whitson, and they had Terry trying to straighten it out, and Terry came to me, and he said, "Look, take a look at this USGS scenario

and say what *you* think about it.” And so I did that. And then Mike Scherr, OES, had a neighbor guy by the name of Punch Ringhofer [pronounced RING-hoff-er], who was a key deputy in San Bernardino sheriff’s office, and he was going to Peace Officers Standards and Training graduate school courses in Sacramento, and Scherr talked Ringhofer into writing up a law enforcement version of the ICS, and came to me as a consultant on that, and I helped him write his graduate thesis for that. That turned into a contact with Mono County because they wanted the ICS, and I rebuilt their state OES all hazards plan—in fact, two of them—to reflect ICS as their major—Mono County was the first county in the United States to adopt ICS as their county emergency organization, see. And that was quite a job. I did a beautiful job on that. I loved that, see.

LEISZ: Bob, tell me. Jean thought you’d retired, didn’t she?

IRWIN: [Laughs.] Oh, yeah! [Laughs.] Oh, yeah!

LEISZ: So, now, this is a couple of years that you’re involved in this after retirement?

IRWIN: Oh, well, wait till I finish telling you. Do you remember when I came up and saw you and Murphy years later? I don’t know when that was, ten years ago at least.

LEISZ: Yes.

IRWIN: All right, I did the Mono County plan, two of them. Then they got the scare for the eruption at Mammoth Lake, so I did a caldera response plan, all based on ICS, all coordinated with OES. I had to fight other guys in the OES to get that ICS idea approved, but I got it approved. Twenty-one agencies involved in the Mono County response. I got write-offs on every one of those guys.

Then I started doing work for the City of Fresno, the City of Portland. I went up to Alaska for their Department of Defense, who was running civil defense for them. Got them all

squared away on going to ICS. I did that—I probably worked about half time on that through the years.

LEISZ: So how many years is this?

IRWIN: I went until I was sixty-nine. In 1999 I had colon cancer, and after I had the operation, which was very quick—in two weeks, they had analyzed what was wrong with me, and I had had the operation, but then I had to go through six months of chemotherapy, and everybody said, “That’s gonna wear you out,” and I said, “No, it’s not wearing me out”—until it was over, and then I just kind of collapsed, and I really decided then that I *was* going to retire. And all I’ve done since then is volunteer here and there for a year.

LEISZ: So you had another, more than—

IRWIN: Twenty years.

LEISZ: Yes.

IRWIN: Yes, twenty years of working in some form of emergency management, applying the incident command system elsewhere.

LEISZ: Then I remember a contact from you that was not too long ago, but it had to do with the thirty-year reunion.

IRWIN: Yes, yes, right.

LEISZ: Tell us about that.

IRWIN: For one thing, I’ve got that here on a videotape and two DVDs, which has been condensed down—got rid of all the other garbage, just you and I and Terry Haney talking about FIRESCOPE proper.

LEISZ: We can add that to the material for this interview.

IRWIN: I want to send one of these—and I'm going to take one of them home with me—and you've got to tell me which one you want me to take home, because I'm going to send one of them to David "Dave" Stack at the museum.

LEISZ: The museum.

IRWIN: Yes.

LEISZ: So you got involved in the planning for the thirty-year celebration.

IRWIN: Oh, yes. Well, Arnie and Mike Scherr came up with this idea that they wanted a thirty-year reunion, see? "Come down here to Riverside and help us plan." So I went down there for three days, and we started planning. It grew bigger and faster than FIRESCOPE. More people had to be involved, more people had to be involved, more—ah! And because I had committed to do it, I stuck with it. Both Arnie and Mike Scherr dropped out. They said, "The hell with it." They didn't want to put up with the politics. All they wanted to do was drink beer and have some barbecued hamburgers. That was what their original idea was.

LEISZ: They had it a very informal—

IRWIN: Yes.

LEISZ: [cross-talk; unintelligible]. And you guys put together a major program here in Sacramento.

IRWIN: Yes, yes, yes. That just exploded, see? That was another thing that—well, I never had a key player part in that, but that just went away from everybody, because the minute Sacramento City fire department heard from Mike Barrows, who was still—he's still connected with all the fire services—heard that FIRESCOPE was going to do this and they needed some logistic help, the City of Sacramento fire department says, "Hell, here it is. What do you want?" And that grew. Then Jerry Haliva got involved, Campbell's old consultant-buddy.

LEISZ: And you're talking about [William] "Bill" Campbell, the legislator.

IRWIN: Yes, Senator Bill Campbell.

LEISZ: We haven't mentioned him at this point. Why don't you recall just a little bit of the role he played in helping FIRESCOPE?

IRWIN: All right. Bill Campbell at the time FIRESCOPE was rolling along, beginning to build some real impetus and getting recognized—Bill Campbell was senator in the California legislature. He had been, for a long time, a really good friend of Dick Barrows and a cribbage player and all that kind of stuff. I think Barrows was really instrumental—I mean, Barrows wanted the OES funded, see. [Chuckles.] And Campbell was the guy to do it. But also he had to do the whole FIRESCOPE thing. Campbell actually formed a new legislative committee on—I don't remember the exact name of it. It was Fire and Emergency Services. And that committee had some spunk to it, and Dick Barrows and I kept feeding them information and briefings and stuff like that, and when the federal funding dried up—and I say that on the tapes here—when the federal funding dried up, Campbell and the state was the only other alternative to keep our stuff going, all the things we talked about: documentation, training, maps. All that stuff would have fallen through the cracks if the state had not funded that at a maintenance level. And Campbell did that, and that's why I saluted him at the thirtieth reunion.

LEISZ: The FIRESCOPE was really kind of a unique program, certainly in one—I don't know of any parallel—with the program effort in research, development and application that has lasted for the amount of time that FIRESCOPE has. And also it has had the broad participation at the federal, state and local level.

IRWIN: And international.

LEISZ: And international now, certainly. But as you look back, do you have some kind of thoughts in perspective that you want to add at this point to FIRESCOPE as an effort, not just the products but the applications that you see? It seems like they're forever broadening.

IRWIN: All fires that I fought in my time—you know, I was a fire boss—I never had the title of incident commander, if you can believe that.

LEISZ: You got to be too old.

IRWIN: [Laughs.] But the twenty-two years that I was a fire boss, I had probably a hundred-and-some fires in those years, and I always felt good about the people and the outcomes of the fires. I never lost a person, never had any serious injuries. I always felt lucky for that, as well as grateful. I look at the FIRESCOPE effort and the people that started all that energy going [voice cracks with emotion], and I think, *How did a poor dumb kid like me wind up with that on my résumé?* So wonderful. People like yourself. You probably don't remember how much you helped me, but you did. I remember coming to you and singing the blues once and saying, "I gotta meet with you Doug. I can't go on working for you without knowing where you want to go, what you want to do." And you set up a thing where I met with you once a month. And that was a super help to me. To go back to this thing about not working outside the box—no, I really think about that part of it more than anything else about FIRESCOPE, because I was a dumb kid, boy, I'll tell you.

LEISZ: You know a lot of us feel that way, but it makes you really believe in the fact that you can bring a group of people together and you have something that you don't have individually.

IRWIN: Right, right.

LEISZ: If you can have the right culture to generate the participation and creativity and applications, and be able to argue with one another without really injuring the other party but

carry it on constructively. I think FIRESCOPE is probably, for me, the ultimate synergy operation, where we used resources outside the fire services, to analyze things, and we had a wealth of people that had part of the answers.

IRWIN: Yes.

LEISZ: And we had brain power to think about some more answers—

IRWIN: Yes.

LEISZ: —and in really expanding it. But you have to keep that culture alive and feed it, and you certainly made major contributions to getting the project to a successful conclusion.

IRWIN: I know—I am aware that there are things I did, like the decision process and writing the unified command concept and helping Arnie get started doing some stuff—I know that there are specific contributions that I made to that program that made it work, right? But it only made it work along with the efforts of everybody else. “Turn the gorillas loose.” It’s just a happy time for me.

LEISZ: Well, Bob, I think this has been really an interesting interview, to pick up on many of your thoughts about it. With a project as comprehensive as FIRESCOPE is and was, you can’t do it all in an oral interview, and we’ve got the bibliography, we’ve got the tapes, we’ve got reports, and we’re going to have at least a combination of interviews, I think, that are going to make for a good story about a project that ended up affecting the nation and affecting the world with bettering how we direct ourselves to respond to emergencies. But thank you very much for the interview. It’s been a pleasure to sit with you.

IRWIN: Thank you, sir. I appreciate it, too. I want to tell you that supposedly this month, the National Museum of Forest Service History is going to publish an article that I wrote about

FIRESCOPE. I titled it, "The Biggest Little Program in Forest Service History," because we started with seven counties, and look where it is now.

LEISZ: Wonderful.

IRWIN: And I wrote that story, and I hope we see that in print this month.

LEISZ: I'll look for it.

IRWIN: Yes.

LEISZ: All right.

IRWIN: Okay.

[End of interview.]