Mark Brown, August 2010

Topics: Dept. of Commerce Budget for Modernization, educating Hill staffers

Mark Brown: Well, this is Mark Brown and during the time of Weather Service Modernization from the early 70s until the mid-90s I was part of the Department of Commerce Office of Budget and served as a Division Chief that oversaw the formulation and selling of the NOAA Budget to Congress and then later as the Budget Director for the Department of Commerce for 15 years.

I worked closely with both the Administrators of NOAA and the Directors of the Weather Service over that 20 year period to come up with and execute, in a way that we could get funded in the budget, the Weather Service Modernization. I sort of marked the start in mind of the discussions of Weather Service Modernization with the Xenia, Ohio tornado outbreaks in April third and fourth of 1973. There was a host of tornadoes which resulted in a lot of deaths and property loss and there was not much in the way of detection at that time. And by the 4th Bob White, the first administrator of NOAA, was summoned up to the hill and receive a lot of questioning on how they can improve forecast and warning. As an immediate result, approximately 70 smaller radars to detect tornados -- they were five centimeter S band radars I think -- were authorized by the Appropriations Committee and funded deployed by NOAA.

Also during this time NOAA was taking its first stab and development of forecaster tools to replace the grease boards and maps then in the 300 and I think it was 85 [385 or so] or so weather stations that existed at that time. The Weather Service undertook an expensive program called AFOS that put some very limited capability tools in many of the state forecast office. But the results weren't that dramatic and sort of towards the end of the 1970s there was a lot more discussion of what could be done to improve particularly tornado forecasting.

3:45 The cost of the AFOS system kept growing and as Budget Division Director in 1978 and 1979 I recommended against continuing to spend additional funds on the AFOS system, because it seem to be expensive, but not working. And Secretary Phil Klutznick at the time said, "let's just go ahead and give them the money and we'll hold them accountable next year." And I think that was sort of a beginning of at least Department of Commerce realization that we really needed to have good planning efforts and good direction if we were going to move to modernize the Weather Service.

About the same time in 1978 and '79 I also became aware of the development of Doppler Radar at NSSL in Norman, Oklahoma and was at that time…even though I was only a Branch Chief at the Commerce Budget Office I attended a meeting in the Indian Treaty Room in the old Executive Office Building that turned out to be the first meeting of the Department of Defense FAA and Department of Commerce NOAA tri-agency effort to develop NEXRAD. And at that meeting I sat between Bob Beck who was the NOAA Budget Director at that time and Joe Friday who was still with the Air Weather Service at that time [later became NWS Deputy Director, then Director] and

the group agreed that Doppler Radar should be developed and that it should be a tri-agency program. And it took us a number of years to get through the Office of Management and Budget, but we did get first research funds and after a long time funds too actually procure the WSR-88s for the NEXRAD program.

6:33 We had a lot of things that were going on same time as the Doppler program primarily as I was mentioning before, development of a modernization plan for the Weather Service. In 1984 and it lasted into 1985 I was on a group chaired by Dick Hallgren that had a broad spectrum of OMB, Department of Commerce and NOAA leadership, satellite leadership, research as well as the Weather Service that came up with a plan on what the Weather Service would look like. And I think we met for 19 days over nine months and developed the overall plan to reduce the number of weather stations to approximately one per state and the staffing plan for those, and about 125 NEXRAD units which we would tie the locations of the Weather Service and published that plan I think in late '84 into '85.

8:12 That resulted in a lot of slow progress through the Department of Commerce and then the Office of Management and Budget and I think we really go some of the budget requirements rolling in 1986 and 1987. The NEXRAD program itself ran into not too much resistance in terms of Congressional funding at that point, but I think Congress was unclear as to the full price tag and initially resisted closing a lot of the one- and two-man weather stations that were only open 40 hours a week. In fact at one point I testified with Mac Baldridge, Secretary of Commerce, and Congresswoman Virginia Smith from Valentine, Nebraska who was not on our Approps Committee came to the hearing and questioned the Secretary for the entire hour of the hearing. He related that he had actually spent the night after a rodeo in jail in Valentine, Nebraska, but she was not moved by this and at the end of the hearing in the car on the way back Secretary Baldridge told me if I ever recommended closing a weather station again he'd skin me alive.

9:54 Never the less the committee eventually approved both the NEXRAD program build a new facilities to accommodate the new weather stations and closing the old weather stations. After that it's kind of a monumental leap in funding and probably getting close to one billion dollars at that point and time. We came forward with the forecaster station the AWIPS program [Automated Weather Information ~~Forecasting~~ Processing System] and we initially estimated the cost of about 350 million dollars for that. And I think about that time Mary Glackin did become head of that program and she and I and actually Steve Gallagher who eventually became NOAA's Budget Officer frequently accompanied her up to the Hill to provide quarterly reports to the Appropriations Committee on the development of AWIPS. And we experienced some cost growth from 350 million, and when it got to 500 million we got thrown out of the appropriations room on a couple of occasions and the committees put a cap of 550 million dollars on AWIPS and we had to work with NOAA to design the system to cost at that point and time. Actually getting towards the mid-90s. So

AWIPS seemed to be the last major hurdle we did get it funded after a lot of difficulty and we had the new weather offices in place, tied to the locations with a NEXRAD with AWIPS. And of course I've left out the whole saga of the GOES satellites and how they were developed as part of the modernization and how the two billion cost overrun did focus a lot of attention on NOAA on those.

12:50 In the mid-90s the budget for modernization dropped off significantly after these acquisitions and at that point the modernization was working well, but the management with less resources seemed to be running into problems and that was the point Jack Kelly was brought in as the…to do a contract study, and then as head of the Weather Service and sort of since that time there's kind of been a little bit of resistance to go to the next generation of Weather Service improvement. But I think we're probably getting towards when we need to do that and don't think I'll be around for the next 23 years, but hope it all works out.

Barry Reichenbaugh: Thanks. Can you remember any particular Hill visits to NSSL or to Boulder for instance? You pointed…I guess -- let me go way back here. You got the very beginning you talked about the Xenia, Ohio tornado outbreak. It was clear from some of these terrible weather events that progress was needed, but getting from the research and development to the point where people saw the value of what might be coming. Can you talk a little bit about…were you much involved in at least maybe making a visit or two yourself, or in articulating through these types of demonstrations of what we were trying to do?

Mark Brown: Yes. I think probably throughout the early '80s until the time we actually got NEXRAD funded, I made a number of visits to Boulder and to NSSL to better understand literally how a NEXRAD radar worked, so I'd be able to explain it to the Appropriations staff and to the Office of Management and Budget. Additionally in the first Reagan administration NOAA had an Assistant Administrator or Associate Administrator, Jim Winchester, who felt that the introduction of NEXRAD radar would allow reduction of weather stations down to about 50. We wound up with 125. But yes, in particular I worked with Scott Gudes, who was at the Office of Management and Budget at the time and we visited not only Boulder but NSSL.

16:28 We went to Enterprise, Alabama to look at their Doppler setup. We visited Sperry, Unisys and Raytheon facilities while they were developing proposals to bid on NEXRAD. So we really did probably learn a lot, for budget people, about the workings of radars and trying to understand which would be the best choice and what were the things that affected the choices before the contract for the WSR-88 was allowed.

Barry Reichenbaugh: Were there any particular representatives or Hill staffers who were skeptical, but got turned around by actually getting a firsthand look at what was being developed do you recall?

Mark Brown: Well, we did take in the House Sally Chadbourne and Jennifer Miller and I think we did go to Birmingham, Alabama and out to Sterling [Virginia] and other weather offices and out

here to Silver Spring to try and get them an immersion of the requirements. Politically I don't think they had any problems they are a statement that we were going to take the warning time from minus two minutes to twelve minutes. Well, it's very powerful with all the members in both the House and the Senate. In the Senate side I think we had Tim Keeney who also eventually came to NOAA as a Deputy Assistant Administrator in the ocean area was the part at this time in the Senate Appropriations and I think he was pretty much supportive along with Senator Hollings, Senator Stevens, Senator Inouye, who were entirely behind us and also were sort of protectors during the Reagan budget cut years so that we could move ahead in this development in these areas.

Barry Reichenbaugh: It was a program that really…it took multiple years to really make it happen from as you said mid- to-late- '80s getting started and wrapping up around '99 essentially. And with administrations changing, and elected officials, and committees changing how challenging was it for that to keep its momentum?

Mark Brown: It was challenging all around particularly in the Reagan Administration where we reduced the budget on many occasions and I think that probably, particularly in the first five years the Reagan Administration, slowed down the progress. It was extremely difficult to get any significant amount of money. Additionally NSSL had to demonstrate that we really would get the kind of benefits from NEXRAD that we stated. I also mentioned, because of the cost another big hold back on the geostationary satellites was the Reagan Administration reduced NOAA's budget and the then Administrator Tony Calio decided to take the entire 125 million reduction out of the GOES budget which eliminated some of the studies that were developing for GOES-G and -H and I think the first one of those satellites in '88 or '89 failed on launch and a lot of the review pointed to that kind of budget cut.

21:50 So there were a lot of things that held up overall progress. I think NEXRAD, once we were able to demonstrate the Doppler capabilities as I said, politically everybody thought the rationale for it was great, you just had to show it worked. And then with AWIPS you had to try and not only contain costs, but show what's the added benefit in addition to having the radar to having this forecaster tool as a high price.

Barry Reichenbaugh: What kind of things did you learn from living through the Modernization any…bits of wisdom you gained or learned some things about how not to do something or how to improve on an approach?

Mark Brown: Well, that's a good question. I think that we learned in terms of being at a higher level in the Department, that the staff that was there, the career staff, had a real responsibility to communicate with the new political leadership regardless of where they were coming from. And I think all the Secretaries of Commerce, regardless of affiliation, were willing to listen and to try and make sure they had a reasonable policy. While at the same time in away trusting us to enforce a budget discipline so that we weren't going overboard in what was being done.

24:08 So learning to understand the programs and communicate them to higher level political people is quite a key and so we also all realized that no matter where you are in the chain, whether you're in the Department or the Office of Management and Budget, or Authorizing or Appropriations Clerks on the Hill, everybody needs to have a good feel for what's going on so that when a proposal is made, they're approaching from degree of understanding so certainly communications is a key aspect of it, but understanding what the political needs of the Administration at hand is is also important to get something done.

Barry Reichenbaugh: Anything else you like to add before we wrap up?

Mark Brown: I think I always like to quote Dick Hallgren on this. He used to say "if we can agree on the policy on this we ought to be able to work through the details of it." And I think that's what we did right early on, was to get policy directions set. So then it was a matter of what the market could afford and how fast we could move as opposed to trying to pick a new direction each time. And that certainly wasn't easy, but it was worth it and great to see the result.

Barry Reichenbaugh: When you say…I want to add a little clarity to that. When you say getting the policy direction set, can you give me an example of that what you mean?

Mark Brown: Coming up with a overall modernization plan that was intellectually satisfying to people at each step of the way. Why is the reason we're going to have this many weather offices, what does the radar improvement do, what does the forecast improvement tool / work station do, and how the satellites contribute to the weather forecasting? Those four areas were they four that needed to be wrapped up sold as a package. And once that was done the rest was incremental in obtaining support.

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