Mark Taylor: My name is Mark Taylor and it is 2:07 p.m. on March 23, 1990. I am interviewing for the first time Mr. Ray French. This interview is taking place at the office of Mr. French at in Richardson, Texas. This interview is part of the Vietnam Archives of Texas Tech University. The first question I have is, you weren't actually in Vietnam but what were some of the projects that you were working on at the time of Vietnam conflict and some of the projects you were working on for the Air Force?

Ray French: What I consider the height of the Vietnam War, the later Sixties, from ’66 to ’72 time frame. In ‘67 through 1970, I worked in a special Office for Future Technology Development to fulfill the required operational capability which was to correct the deficiencies our forces had encountered in the Vietnam War. These mainly dealt with command, control and communications. Some of the programs I was directly involved in were to develop a radio, a hand held radio for downed pilots would go up over the jungle and to penetrate through the jungle for their rescue. Basically, we looked at what known commercial technology was there and packaged a device, which would have that capability to penetrate that dense jungle of Vietnam. The second one that was very interesting was to develop tactical radio which would penetrate two inches of rain downfall during any moment of heavy rains associated with the Vietnam monsoons to allow pilots to find their bases and land. That resulted in the TPN-19 being developed and being fielded about 1970. The third area that comes to mind is the requirement to bring
the battlefield of Vietnam back to the White House. This was literally done through the
use of aircraft orbiting as remote communication transponders back to a gateway, and
through the use of satellites, brought the battlefield information directly into the office of
the President, who at that time was Lyndon B. Johnson. That consumed the integration of
a lot of technologies associated not only with the airframe of ordering aircraft with the
communication package that could function as a transponder and to pick the satellite
earth station and back over commercial satellites back into the Washington D.C. area
where the information imagery, data, both the written and data elements and voice were
collected, and turned into situational reports for the White House.

MT: Did you think that bringing the battlefield to the White House was a good
idea or not necessary? I would like to hear your personal opinion or of some of the
opinions of the officers at the time as to this new development.

RF: From a technology viewpoint, it was a very challenging idea and the people
associated with the program got a lot of job satisfaction from working on the program.
From a military officer perspective, it was the wrong thing to do, because it turned the
Vietnam war into a situation whereby the civilian leadership of our government was
actually running the day to day war from the D.C. area. This not only translated to what
targets we could bomb and also the number of kills that was reported, the number of
wounded that was reported from a U.S. manpower viewpoint, etc. It was a very
controlled environment and as such, it took much of the commander's authority away
from him. He became no more than an extension of receiving his information from up
high and that a lot of times some of the decisions we felt were being made were not in our
best interest militarily.

MT: Could you comment a little bit on the communication ability of the United
States versus North Vietnam?

RF: North Vietnam communications were very crude compared to ours, but it
Was also very effective for a guerilla type warfare. Not only from a strategic viewpoint
of the North Vietnamese, it allowed them to get the proper information to their field
commanders and also maximize the Viet Cong effort in support of the North
Vietnamese. We call it crude because their method of fighting the war was strictly
guerilla warfare. They knew who the enemy was, they knew what the terrain was, and the
field of battle, and they also had collected from the Russians and the Chinese some
technology whereby they were able to, through the use of signal intelligence, collect our
frag orders for our aircraft. They were able to collect air order of battle information in
respect to where our forces were going to be as well as our ground forces and this made
them a very, very, how do I say, very attuned to what was going to happen from our
planning sources. Our communications were doing a lot of things in the clear meaning
that the bulk of our communications when we entered Vietnam was non-secure. The use
of secure communications was practically nil during the Vietnam war. They used
collection devices to collect an awful lot of information about where our forces would be,
a strike, et cetera. The thing it did do, the Vietnam War did do was that all these problems
or deficiencies or shortfalls were recognized and a large development effort was put forth
to correct those shortfalls actually during the Vietnam War from the office I worked in
for security; but, also, to continue the development effort well after the Vietnam War.
That today, with operation Just Cause, the CINC was able to talk secure with the
President as well as the Joint Task Force Commander on the ill fated Iranian rescue. The
battlefield commander was able to talk directly to the White House to President Carter.
And of course, to receive his word to abandon the rescue attempt since we had lost a
couple of aircraft in the Iranian desert. So, the benefit from the Vietnam War, from a
communication development effort, was tremendous and that activity has continued to
follow through to the present time.

MT: Earlier, you spoke of C³ which is command, communications and control.
Was that very evident during the Vietnam Conflict or was that something that evolved a
little bit later?

RF: There has always been a command and control environment.
Communications was recognized during the Vietnam War as being a key ingredient
associated with command and control. Since we had different forces in the Vietnam War,
the Army, Air Force, Navy, Marines, there was a definite need for command and control.
Communications could be able to secure close air support for the ground troops and to
secure bombing raids in support of softening up a target before we went in. The change in
the battle had changed in the Vietnam War, communications became a key ingredient that
was recognized during that time frame and continued to grow and be recognized as the
Achilles heel of command and control of our forces today because it must inter-operate in so many environments.

MT: Earlier you spoke about the North Vietnamese had a pretty good communications network in regard to figuring out to what we were doing because we didn't secure our communications lines. Did we try anything to sabotage the North's communications or to cut down their effectiveness? Were there any programs being used?

RF: Yeah, we tried several things. We used jammers and repeaters against their communications. We also used communications psychological warfare and broadcasting radio broadcasts to change, during the latter part, particularly to change the feelings of the North Vietnamese populace as to, ‘Let's give up this losing battle and come to the negotiating tables.’ Whether or not these jammers and communications means were effective against the North Vietnamese remains to be seen because their command and control was very simple. With the guerilla warfare type activity they were conducting, they had a mission and they had an area of operations. The guerilla forces operated in that area of operations. They knew when to retreat, when to fall back, when to move, when to relocate, particularly among the Ho Chi Minh Trail. All the development efforts we had put together with respect to communications and computer technology that made Puff the Magic Dragon such a dreaded weapon. The Ho Chi Minh Trail became very active at night, moving trucks, moving forces, moving logistics supplies from North to South and from South to North along the Ho Chi Minh Trail. The adding of infrared capability to Puff the Magic Dragon uncovered a lot of this as well as sensors that had come out of the requirements of monitoring the Ho Chi Minh Trail, and the movement of forces throughout the various areas. This still did not aide the U.S. forces other than knowing where the enemy was and being able to find them. But as far as the effectiveness of the kill, with advanced technology, is suspect because as rapidly as they came on to the Ho Chi Minh Trail, they disappeared that rapidly off the Ho Chi Minh Trail. That was one of our biggest problems.

MT: I was curious as to the climate of our military leadership here in the United States during the Vietnam Conflict as to what was happening and why certain things
weren't working and why they were able to re-open the trail at night and resupply their troops despite our best efforts?

RF: The Vietnam War, from a development, future technology viewpoint, the war offered an unending line of dollars that was made available to correct the deficiencies and shortfalls of our command, control and communications capabilities to wage a war. The senior people that I was associated with were all very proactive to correct these deficiencies and shortfalls and to field things in the most expeditious manner based on proven concepts to the forces and to get it in to overcome these deficiencies. From that perspective, everything was positive. However, there was also a negative viewpoint associated with being in the military during the Vietnam War. That was from the civilian populace in the U.S.. We were told that in traveling to various contractor's facilities to find what technologies could be used for solutions, and traveling in and out of the Washington DC area, we were told we had to travel in civilian clothes. We could not, should not wear our uniform or show in our presence that we were military as we traveled throughout the United States to find the latest technology. That was extremely negative to everyone associated in the office was the restrictions we had when we traveled. Part of our requirements despite the deficiencies we were trying to overcome.

MT: You spoke earlier of a new type of philosophy of somebody presenting a problem and then you were supposed to come up with the solution. Would you explain a little bit about this, and was this unique to the beginning of Vietnam?

RF: In the Vietnam War, I would say in the early to mid Sixties, it was recognized that there were a got of deficiencies in the command and control and communications arena that we had never encountered before. There was a dedicated effort to overcome these deficiencies They set up a regulation, an Air Force regulation, that allowed the operational forces to document their deficiencies and state what they would like to see to overcome that, in the form of a required operational capability document. These documents went from Vietnam to the Pentagon. There was a very short handling time and they were turned around very rapidly within the infrastructure of the Headquarters of the Air Force and disseminated it to the major commands that were charged with responsibility of correcting these deficiencies. The funds were readily available to find a solution and in finding that solution, we got a feeling, it was a nice environment to work
in, with respect to finding solutions and not worrying about money and getting the
requirement funded and getting a solution field tested and then shipped to Vietnam and
then go on to something else.

MT: I was curious as to some of the lessons that we’ve learned in Vietnam as
opposed as so some of the things we are doing now in Central America, maybe attitudes
or things that are different?

RF: Part of the biggest drawback to the Vietnam war that, from my personal
perception, it changed the type of leader the military was looking for. Before, the
commander always had the authority, the responsibility and the accountability for his
command, however large or small it may be. During the Vietnam War, a lot of that
authority was taken away from them by the war. The conduct of the war was run out of
the Washington DC civilian complex. This is not to say the military is not a civilian run
organization, it is because we have the Secretary of the Air Force and his Staff, people
should recognize that the U.S. military represents the public opinion of the United States
and the voted representatives. If they want the U.S. military to be the best marching band
in the world, it will be if they want it to be. If they want it to be the best war fighting
capability, then it will be and there will be a commitment on both sides for that. The
Vietnam War from my perspective, took a lot of the authorities away and made a lot of
our senior leadership ‘yes’ people. Instead of bucking the system and offering solutions
that may be contradictory to both political and policy issues at the time that were in the
best interest of waging the war and winning the war, fell by the wayside. A lot of people
who were over there, senior people, lieutenant colonels and above, sometimes wondered
why they were there and what the purpose of being over there was for due to the duration
of the war and the tide being turned back here in the sixties as being a turbulent period in
our history. A lot of, not only political unrest but student uprisings, other unrest with
respect to racial unrest. At the same time, the U.S. was committed to putting a man on the
moon, which we did and wage a very, I would say, unfriendly war, that there was an
awful lot of pressure put both upon the military and the civilian populace at the time. As
a result, I always felt that the senior leadership changed in the Vietnam War went from
one of being accountable to do the right things, to one of, ‘I’ll wait and see what
directions I get and I'll salute smart and carry it out.’ I think that that has had a
detrimental impact all the way through the seventies on the military leadership of the U.S. armed forces. Tough question.

MT: Yes.

RF: I really feel that way.

MT: Do you feel that Central America represents another Vietnam in the dormant stage?

RF: No, I think that the civilian populace of the United States will never allow another Vietnam to occur. I think that falling out of Vietnam, we have structured the military totally different. We’re oriented now to operations associated with guerilla warfare. We have established two unified commands to address that, Special Operations Command and also U.S. Central Command. We have expanded and broadened the CINC's responsibilities in the Southern Command and also, Atlantic Command. The CINC's are charged with waging war in their theater. We have become more of a cohesive force by drawing upon all of the military departments' strong points and putting them under a single command such as the CINC and allowing him to control what needs to be done within that area and I think it will be a lot quicker and a lot shorter. There will always be guerilla warfare throughout.

MT: Are there any other thoughts you have on the Vietnam Conflict or the time frame?

RF: I guess the other thought is that if you take a look at the U.S. military involvement from the forties we came out of World War II and then in the fifties we went into the Korean War, and then in the sixties we went into the Vietnam Action, they don’t call it a war, but the Vietnam Action, and after we came out of Vietnam in the ‘72 time frame, we have had maneuvers in the seventies with the Iranian crisis and the early eighties we had the Granada incident and more recently we had Panama, Operation Just Cause. It seems like every decade that U.S. forces are going to be involved. Today, you can say that there are forty wars going on throughout the world of nations. As far as another long term Vietnam drawn out war commitment with the U.S. not to win for political or policy reasons, I don't ever see that happening.

MT: That brings up one other question. How prepared was the U.S. military for Vietnam?
RF: From a weapons superiority stand point, we definitely were the superior force in capability. From a communications stand point, we had better means to communicate which sometimes allowed the enemy to capture the communications and exploit it to their advantage. But, from a superior viewpoint, to wage a war, we had all the capabilities. What we did not have, we did not have the resources nor the weapons systems over a long time that we had enjoyed both during World War II and the Korean War. We ran out of airplanes. We ran out of communication assets. We ran out of a lot of assets that we had to take from foreign military sales or through country to country agreements to help us to provide the required logistics to support the Vietnam War.

MT: That brings up another question about procurement. There were a lot of protests, were there ever any problems with procurement with some of the industries?

RF: Some industries would like to not exploit the fact that they had received a contract to do something and tried to keep it low key. As far as U.S. industry not supporting the Vietnam War, there was never any evidence to support that except the fact that they did not want the protesters at their facility and therefore, they kept everything low key with delivering weapons systems or command and control communications systems.

MT: I guess that is it, unless you have anything else you’d like to add.

RF: No, I wish you well, I really do.