

10-3-2003

David Winter oral history interview by Andrew Huse, October 3, 2003

David Winter (Interviewee)

Andrew T. Huse (Interviewer)

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Winter, David (Interviewee) and Huse, Andrew T. (Interviewer), "David Winter oral history interview by Andrew Huse, October 3, 2003" (2003). *Digital Collection - USF Historical Archives Oral Histories*. Paper 200.
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USF Florida Studies Center
Oral History Program
USF 50th History Anniversary Project

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At Orlando Utilities Commission
Date of Interview: October 5, 2003
Editor: Danielle E. Riley
Date of Edit: January 21, 2004

Interviewer: Andrew Huse
Location of Interview: Tampa
Campus Library
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Final Editor: Jared G. Toney

TOPICS OF DISCUSSION

Arrival at USF and the new Engineering Program

Mr. Winter began as a junior in 1965. He had a Selby Foundation Math/Science Scholarship when he graduated from Riverview High (in Sarasota). The scholarship was for two years at a community college and Mr. Winter attended Manatee Junior College for his first two years of school. This would then allow him to finish his bachelor's degree at any state university in Florida. He only had three choices, Florida State, the University of Florida and South Florida, which was just beginning its engineering program. He checked out all three and decided to go to USF because he "liked the idea of a small start-up."

He heard about the program while at Manatee, probably in 1964.

First visit to USF

He got an interview on campus and talked to a counselor, this was one of the selling points for USF, he got to talk to the dean in person and didn't receive this kind of personal attention at FSU and UF. Dean Kopp was "sharp" and "charismatic." He basically brought the faculty down here from UF and so the staff was very good and experienced, plus Mr. Winter understood that many of his professors were going to be department chairmen. There were only five students in his graduating class so there was an opportunity to have a great amount of interaction with students and faculty in his program.

Physical appearance of the campus

He liked that the campus was new and he liked being close to his home in Sarasota. He was also excited by all the unused property and the possibility that the campus could expand.

The dorm rooms at the time were small, there were only two dorms, one for men and the other for women. The boys and girls needed to be kept separate. The College of Engineering at the time was all male.

Dorm life was fun. His roommate was an accounting major; they had come to USF together. Mr. Winter was the president of their floor and his roommate was the vice-

president. Mr. Winter's best friend was a resident assistant of the dorm, so they had a lot of leeway as to what they could and couldn't do.

Activities on Campus

The school philosophy at the time was "accent on learning," making it almost anti-sports. They wanted to concentrate on education. Sports programs were minor, mostly intramural, with inter-dorm games on the weekends. The student union was popular, and showed good movies. Dating was important for a young guy, but there wasn't much to do if you got a date. He had a car, which allowed a little more freedom. It was an MGB sports car, it was only about a year old at the time, a convertible and was pretty fast. It impressed the ladies.

The young men would take dates to the drive-in movies. At USF he met his wife of thirty-six years, Catherine. They got married right after leaving school. She majored in education sociology and he had dated her roommate. The roommate wanted to see him again, so she called Mr. Winter and said "Catherine is having car trouble." Mr. Winter had worked as a mechanic through high school so she asked if he could help Catherine. He came over and got the car started and then Mr. Winter asked Catherine out, which caused some problems between Catherine and her roommate. They got married right out of college.

Education at USF

The engineering classes were "wonderful," they had "top-notch professors." They were all "really good teachers" and most of them had worked in private industry. This allowed them to give hands on training, which was one of the things that Mr. Winter was looking for. He was most interested in the practical side of engineering, not the theory. They were small classes and well structured. The program came directly from UF because that is where the faculty came from. Most of them were doctors at the time and they all had work experience.

The most influential professor in Mr. Winter's schooling was Dr. Wimmert, next was Dr. Griffith, but Dr. Downey was also impressive, he had about "two-hundred patents from Monsanto." He had some major patents and "if you just copied down his notes from the board you would have a book." This shows how organized and intelligent he was. The classes were tough.

Dr. Wimmert provided some inspiration for future businesses of Mr. Winter's. Before teaching Dr. Wimmert had worked with "Rapid American," a conglomerate that bought other companies, turned them around and then resold. Kind of like in real estate, buying a home, fixing it up and then reselling it for a profit. Rapid American used people like Dr. Wimmert to look at a company to see why it is in trouble; they would purchase the company and turn it around. This is different than "junk bond" people. They don't try to turn companies around, they try to buy companies that "have assets worth more than their stock and then they liquidate the company." Mr. Winter is against that, but Rapid America created new businesses and fixed up old ones. This was exciting to Mr. Winter and encouraged him to go in a similar direction, on a smaller scale.

Other students at USF

“Being part of a small college was definitely an insulating factor.” Going to school in the sixties was different than the collective memory of flower power and peace movements and what not, in the College of Engineering there was a different mindset. The companies that were thought of in a negative light by one group were seen positively by others. When Dow Chemical came on campus to interview engineers there was a large group of protestors on campus. It looked like the companies might have to leave but Dr. Wimmert and others went out and barred the way. Wimmert took a sign from the leader of the protest and he told the student “if you take one more step I’m going to break this over your head,” and the whole protest evaporated. The interviews went on as planned.

The thing that was more insulating than anything was the fact that people in other colleges had it a little easier. They had less homework and more free time. Mr. Winter also had to work his way through school in order to keep his car and while others were trying to stay in school and stay insulated, Mr. Winter wanted to get out of school and begin working. He was in a different situation than many others.

This was also when Star Trek started and this drew more students to the union than anything. On the nights when Star Trek was playing, a student would have to show up early to watch or the union would fill up and there would be no room. There weren’t a lot of televisions around at the time and so students had to congregate in order to watch this show. They would get together and watch the one television at the union and they would have a huge gathering.

He didn’t have a lot of spare time because of his curriculum and job, he feels that his routine at USF was even more rigorous than it might have been at UF. They all had high expectations of students and faculty in the program.

He was very happy that his professors had the time and the small student body to personally interact with their students. Whether in where you live or where you work it isn’t necessarily bad for things to become bigger, but you do become nothing more than a number in some cases and that was not the case when he was in the Engineering Program here at USF. That personal and individual attention was important, this goes both ways, you can’t hide, and you get great attention. These were both important.

They had fun at faculty roasts and student roasts. Betty Nelson was their “Mother,” she was the secretary, and is now married to Dr. Scott. She took care of all the engineering students.

Dr. Dawson and Dr. Scott are probably the only two of his former professors still living. Mr. Winter knows that both Dean Kopp and Dr. Wimmert have passed away.

Experience with the US Steel Management Program

In 1967, Mr. Winter had a “wonderful experience” with US Steel. This was during the Vietnam War and he had applied for the Air Force Academy while he was at Manatee

Community College. He had an interest in the military and when he graduated from USF there were a lot of people interviewing for positions back then and he took the best paying job, US Steel. This came with a deferment, because they didn't want to bring people in and then lose them to the Army. The first six months was management training and they went and viewed every single aspect of US Steel. A trainee spent a few weeks in accounting, a couple in sales, purchasing, inventory, manufacturing, the steel mill, the wire mill, the rail mill. New hires got to see all this stuff, there were the open-hearth furnaces, which were "pretty spectacular." When the steel was cooked in this huge oven, they would use dynamite to blow a hole in the bottom of the hearth to allow the molten steel to run out and flow into large ladles (about twenty feet high and fifteen feet in diameter) on cranes, steel would come into them and then poured out. Everyone in his group was full of questions, they were enthralled. One guy looked at the wall on this catwalk and saw holes in the metal walls. He asked where the holes came from and the guide told them that if there was a problem with cooling temperatures or mixtures the contents of a ladle might explode and there would be projectiles through the wall. They didn't ask any more questions and just decided to get out of there.

This was in Birmingham, Alabama and during WWII, US Steel had 25,000 people employed, they had their own housing, grocery stores, medical, dental, eye care, they even had a hospital. They had a feeling that you were part of a family when you worked for US Steel, but it was also a VERY dangerous place to work; there were many deaths and injuries. These machines needed people to run them, this is the benefit of automation. The things they worked with were hot and dangerous.

The entrance into this world was overall a very good experience. He saw that some of the technology was old, but some of it was new and interesting. He was involved in the automation of a roll-mill, a seven million dollar computer project, which could be done today for \$50,000. Think about how much seven million dollars was worth in 1966. That is the benefit of technology, things become less expensive. One of his most recent jobs was for Erickson Cell Phones and computers build the cell phones, this is why Erickson can just give the cell phones away. There were four robots and two people that worked building the phones. The two people sit in easy chairs that recline, they read books and only get up when one of the robots chirps and needs fixing.

US Steel was the opposite, there was a huge amount of manpower working for that corporation. In 1967 there were around 14,000 people working there. Everything was done manually back then.

Back to USF

In 1972 Mr. Winter got an MSE in Engineering from USF. He took a cut in pay to leave US Steel, the training program was great, but the projects weren't going to the newer people. The training and workplace disparity was great. He took a pay cut to come back to Florida. He'd enrolled in the graduate school at the University of Alabama and had taken a class, but after he quit US Steel he decided to come to USF for his master's degree. The curriculum at the time was geared toward a master's program. When the faculty left Gainesville to come to USF they wanted to pattern the program after

Stanford. The original goal was to offer a master's program immediately so people were encouraged to go through the master's program. Engineering at the time was five years of courses for a bachelor's degree.

He was only at US Steel for about a year and a half and came back to Florida to work; he started the master's program part time and decided that it was going somewhat slowly. He and his wife tried to work a full time course load, but they had a second child, so he only took one full time graduate semester.

Experience of returning to USF

Mr. Winter really enjoyed the experience of returning to USF. Even at this stage of his life he wouldn't mind coming back to school either as a teacher or a student. He enjoys learning, even as we speak his chosen field (computers) is constantly changing.

When he returned he considered going into patent law and looked at Stetson University in St. Petersburg. He also looked into an MBA program because he was very interested in management at the time. Things have changed. When he talked to the head of the College of Business and the MBA Program, he said that the program would be happy to have him, but there would be an additional forty-five hours of accounting and marketing and various other necessary undergraduate classes. Mr. Winter then went and talked to his professors and Dean Kopp at the College of Engineering and used his hours available outside of the College of Engineering. Graduate students could take any graduate courses the university offers, so he enrolled in engineering and took the MBA courses, which allowed him to avoid the prerequisites. He took graduate level accounting and marketing etc. This was beneficial to him because he took the necessary engineering courses and took business electives, this was a real good choice because it gave him a business foundation.

How did campus life differ from his undergraduate years?

While in the bachelor's program he loved philosophy courses. He would go to coffeehouse gatherings or discussions at someone's home and the discussion would always move to "the establishment," whether the establishment was established religion or education, the students in the 1960s felt they didn't need anything associated with the establishment. This was the belief system of many in the hippie generation. This group tried the "commune thing and whole bit and found out that it didn't really work all that well." So by the time he came back in the early 1970s, a lot of that disappeared. He was focused at this time because he had a wife and family. Mr. Winter feels that one unique thing about a USF education is that "it is not just a commodity that you buy, you just don't purchase a degree, there are places today you can do that...if you really take advantage as a student and learn what's being taught and focus on that I think you are much better off." He had gone through a wild stage when he was younger, but by graduate school he was very focused.

In graduate school he took as many computer courses as possible. There wasn't a lot of flexibility, but he loved the computer courses that he could take. Dr. Ross taught "Fluidics" and Mr. Winter did an undergraduate a graduate project in fluidics. Back then

fluidic computers were just beginning and a lot of people don't know there are such things as mechanical computers. Fluidics are still used today and control certain things, such as airplanes. Air is a fluid so we have a natural control system because we are pushing the plane through a fluid (air), you can use the air coming in, focus it, then run it through a computer to control surfaces etc. You can design fluidic computers with components that are easy to understand. Pressure is easy for people to understand as voltage, there are similarities between fluidics and electronics.

Dr. Downey taught some statistics and operations research courses that were very interesting to Mr. Winter and these have been applicable to his life. There are many things that a student might learn that he or she will never get the opportunity to use in the workplace. The students are taught a lot in engineering programs and the philosophy is the most important thing that a student leaves with. Every school and every college has a philosophy and Mr. Winter feels that he finished the engineering program at USF with a philosophy of problem solving. This is important in any kind of engineering because a problem is solved by the same processes when broken up into little pieces.

This is an experience that has served Mr. Winter well while working in some state of the art companies with state of the art machinery.

Numbers of Students in 1972

There were a lot more students in 1972 and he had the opportunity to make some new friends. The program had "grown significantly," Mr. Winter is pretty sure that by the time he finished the graduate program the new College of Engineering Building was built, which was exciting because during his undergrad they had used the math and science buildings for class work.

First startup

His first startup was called Interspec, it was essentially a collection of four engineers. They computerized bowling scoring systems. They were all involved in bowling and the three other people Mr. Winter was working with were working for ECI (Electronic Communication Incorporated) in St. Petersburg. Mr. Winter worked for IRC (International Resistance Corporation) and the whole group was interested in computers, one of them, Ron Binning, was a fellow graduate student at USF. They decided to start a computer business together and league bowling was a big deal at the time. There were problems with scoring and histories and everyone wanted to be able to keep track of their scores, they designed a database, this was their first start-up. He invested about \$4,000. They decided that you could buy a Data-General Nova for \$12,000 so they decided to get the computer and have a little money left over. He had to get out of this plan before too long because Mr. Winter went to Orlando for a startup.

Interspec was a parttime experience. At the time he was also working for GEO Systems and Navigate, his full time job was doing CIM (Computer Integrated Manufacturing). This is when a computer controls what is going on in manufacturing. At the time they sold you a computer and you needed to build your own operating system, at Data General they had to go so far as to write their own compiler.

They were doing large systems for the Department of Defense. These were giant cranes that would go out and retrieve things for assembly, the air force base in San Antonio was the most fun. They were doing reworks on jet engines and all they had to do was type in the airplane and the procedure desired and the cranes would go out and bring six foot cubes with parts to work staging areas they would scan and tell what is needed to rebuild the engine and this would go back to the mechanics so the mechanics would know what they needed.

In 1974 Mr. Winter received an offer for a startup company in Orlando called Retrivue. The company that was printing the books for directory assistance. The big book came out once a month and the small book was an addendum daily with adds and deletes. They decided to computerize the whole process. He went to Orlando and they designed computer hardware and a terminal just for directory assistance. They designed the hardware system because they could not store and retrieve all that data. Mr. Winter got a patent and a patent pending out of that system. There were only ten stockholders, every person involved got ten percent of ownership. Mr. Winter was able to supply knowledge so he didn't pay for the stock, everyone else donated money. Mr. Winter was vice-president and responsible to development of the product.

They eventually sold the product to three phone companies and once they got into the marketing aspect they realized that phone companies liked the service, but worried about the size of the company and whether or not it would stay in business. So therefore they had a stockholders meeting and they decided to sell the company. They sold to Comshare from Ann Arbor Michigan, a very large company. Comshare sold ten of the systems in the first few months and they bought the patent. They recognized that Mr. Winter was important because he designed and implemented everything and he was in the contract for sale of the company. The contract stipulated that he move to Ann Arbor and work for Comshare. He was not willing to be sold with the company. He went to a stockholder's meeting in Miami, there were people who advised Mr. Winter to say he would work for the company and then quit. He was very down and while driving home he discussed it with two investors and his wife. He decided that he didn't feel like they were selling the company and "David Winter" he felt like they should just be selling the company. He called Tony Camazzi the VP of Comshare and told Tony he didn't want to be an employee of the company, but would offer a three-year consulting contract, making himself available to also come up for six-months to train whoever ran the system and run the installations of the system. Tony said "you could have just taken the job and left us." Tony really respected Mr. Winter for that and they went along with the deal.

As a result of this deal he formed his own consulting business.

The fact that he was independent and enjoyed working for smaller companies made his career different than what it could have been. Mr. Winter spent the rest of his post-startup career with smaller companies doing "skunk works" for large corporations. He would work with Rubicon Systems (a new startup), he became project manager, they designed an advanced graphics engine the Foxboro Corporation in Massachusetts. This

gave him a chance to work with small companies doing projects for large companies. He worked in this capacity for EDS Corporation, NCR Corporation, these are large companies that needed some special computer control systems. Near the end of his career, Mr. Winter began to work in robotics again. He worked on many newspaper mailroom systems. Working on all the bundling, labeling, wrapping and sorting that is necessary to bring the paper from the press to the truck. One of his last jobs was for a Stockholm, Sweden paper with over two million in circulation. He did a lot of work to move companies towards greater mechanization.

Final Thoughts

“Engineering was a perfect choice for me, I have been blessed because I truly enjoy what I’ve done.” Despite the fact that he has met some people or jobs along the way that he didn’t care for, overall he really enjoyed all the jobs he has done. In a lot of cases, especially the computer work, he would probably work for no pay. Mr. Winter retired for a year and half about three years ago and found that he would be on the computer while at home. He decided to just use the skills he acquired and keep them current, so he has gone back into working but not as much as before. Lately he has been building “smaller fires,” he has built the “big fires” already.

His biggest piece of advice for young students and young engineers is “don’t be afraid to go after the business part of it as well.” It is important to remember (quoting an unnamed professor): “As an engineer one of the most important things you can learn is how to sell, and the first thing you have to sell is yourself, once you’ve sold yourself, usually everything else is easy.” Mr. Winter has seen time and time again someone who is a little well rounded does very well in business, maybe they aren’t the most gifted people in the world but they are very successful.

End of Interview