This monthly article highlights one of our branch members. We hope that you enjoy knowing a little more about your fellow members and the interesting life they have had. If you have someone you would like to nominate or if you would like to help author an article, please email the editor, Ron Nakamoto, at ron.nakamoto(at)yahoo.com.

Editor'sNote: In the late 70s John flew satellites for the Air Force from Sunnyvale Air Force Station (SAFS). In 1959 the Air Force had established a satellite control center on a portion of land purchased from Lockheed to support the CORONA program. CORONA was a joint CIA/Air Force photo reconnaissance satellite program. SAFS was established for the Operational Command and Control for the program and many more to follow. The AF Station became known as "The Blue Cube", since its main building was a windowless blue box of a building. The operations evolved to become the central node of the AF Satellite Control Network (AFSCN). AFSCN consisted of control centers, tracking stations and test facilities linked around the world to manage the fleet of defense and other government satellites. To learn more, watch YouTube "A Point in Time: The CORONA Story"

JOHN RAY

Here is John's story…

I experienced a wonderful childhood in Jackson, Mississippi where I was born. At that time, living in the state capital was like getting the best of a city life and a rural life. My friends and I got to play together – riding bicycles, felling trees, building a zip-line between two trees, playing in a small creek getting so muddy we had to be hosed off before being allowed in the house. We even built electric motors with wire and bent nails, a project I found reading Popular Science Magazine (remember that one?). I once cut a golf ball in half to see what was inside (it was a smelly liquid under pressure which sprayed all over the shop). We would buy powder DDT at the hardware store and spray it into little paper bags, throw a hand full of the powder at the wasp nests and run. Who knew about the cancerous effects of DDT at that time? I guess these were all early signs of an affinity for engineering. My best friend's father had a farm not far from town. They raised cattle and we would help out with seasonal chores, like bailing hay. We once helped deliver a calf which was stuck and needed to be pulled out. What a great life lesson.

Another friend's father raised horses. The horses ran wild on land in the Mississippi delta. Once a year he would catch a few and have a rancher break them, well sort of. He would then bring them to town where he had a few acres of land. My friends and I would then ride the horses around having a great time. After six to nine months, he would sell the "well-mannered" horses and we would start over. Yes, I was thrown off at

least once. We were not paid but got to invite girls, and teenage girls love horses. You can guess the rest of the story.

Then the good times ended. My father died my senior year in High School. The Vietnam War escalated, and the draft was instituted. President Kennedy's Space program literally took off. The music was Rock and Roll, and hippies were everywhere.

I enrolled at Mississippi State University, wanting to be an electrical engineer and work for NASA. I was good with all the courses including data processing but struggled with

Black Beauty threw me off.

Calculus and soon decided to switch majors to Business Administration with minors in Economics, Management, and Data Processing. I finished college with a BS in Business Administration. I spent the summer helping my mother around the house while waiting for my draft lotto number (211) to be called up. By August the last number (209) was picked. Free at last!

I took my first job in Atlanta, Georgia as a computer programmer. I wrote my first program for a toy company. It was an inventory management system tracking a toy's purchase cost and percent profit among other things. To test the program I made up data, ran tests, etc. When it was ready, I demonstrated it to my boss, and everything worked fine. Then we executed with real data and I was devastated with the results. Watching the paper stream, fanfold off the printer, I could see that the percent profit calculation was wrong calculating profits of 150% to 250%. As it turns out my program was right as that was how much profit the company was making selling toys.

My next job was working for Georgia State University in computer operations. It was an easy job and lots of fun. I had spare time so took up white water rafting on Georgia rivers, canoeing the Okefenokee Swamp and Suwannee River, and doing some spelunking. Things were going smoothly until I broke up with my girlfriend. I wanted a change and one of my friends from high school was living in Sacramento, California and talked me into moving across country to start anew. Wow, the things you do in your 20's. I could not find a job in Sacramento, so I tried my luck in the Bay Area and landed a job with a Data Processing Company in Burlingame. After a few months, I decided to move on and received an offer for a computer processing job with the AF Station (later Onizuka AF Base) in Sunnyvale. The job was quite interesting as I was in the business of flying satellites! I spent the next thirteen years learning and growing with various job opportunities.

I met my wife, Roberta, at the Air Force Station. I kept asking Roberta out to lunch and finally she agreed, and we had a very nice time and went back to work. Later she told me she thought I would never ask her out on a real date outside of work. Roberta is the love of my life and we have been married for 38 years. I remember buying our first

home in Santa Clara at an interest rate of 13% (ouch!) and it needed a lot of work, so we put in the "sweat equity" and after a while sold it and moved to Sunnyvale.

My career profession was serendipity. The Base Commander called and informed me that I was selected to be the Computer Security Manager. The Computer Security Act of 1987 had just passed, and the Base was required to have a Computer Security Manager. I had a new career path in a new field for which no one knew what the job entailed. (Editor's note: The Advanced Projects Research Agency (since renamed the Defense Advanced Research Projects Agency) had transitioned "ARPANET" to the academic and commercial industry which named it Internet. The number of nodes and gateways increased exponentially as the communications medium evolved. The military also embraced use of the medium creating their own networks (safe) and linking into the commercial networks (not so safe). As a pioneer, blazing a trail in this new field was exciting and soon I had the opportunity to move to a larger role as the NASA Ames Research Center's Computer Security Manager. I welcomed the challenge and my career progressed nicely. I oversaw the entire Computer Security (now Cyber Security) Program at Ames and played a critical role in crafting Agency policy and practices. I worked at the Agency level managing Cyber Security across all seven of the NASA Centers and became the first "dedicated" Cyber Security Manager for Constellation, a major NASA Program which would replace the Space Shuttle and travel to Mars. Unfortunately, the Obama administration cancelled the program and used the money to fund private companies like Space X. After Constellation I took over the Agency Cyber Security Operation Center (monitoring NASA internet connections for attacks). As part of the Agency's Cyber oversight, I assembled a team of computer specialists to attack a NASA Center first from outside the Center's Firewall, then from inside the Center's Firewall, as if a hacker had gotten around the firewall. As this was a first of its kind "White Hat" attack the NASA Centers resisted, but later acquiesced. It proved so successful that it became an annual event to test network protection and train the next generation of cyber security warriors.

After 22 year with NASA I retired and turned Cyber Security over to the computer nurtured generation. As I reflect on my career, I would definitely say that Cyber Security was a great career path after all. I got to work with many of NASA's Space Programs from the Space Shuttle to NASA Satellites i.e. Kepler, Earth Observing System, Deep Space 1, and the Mars Rovers. As one of the pioneers in this field it has been interesting and rewarding to witness the revolution/evolution of the field both within the government and in commercial industry. The military in 2009 realized the importance of Cyber Security from both a defensive and offensive perspective and established the Department of Defense Cyber Command which is the nation's 10th Unified Command - its mission to "… protect its command and control and information capabilities in support of its forces, ... globally." Who knew where my additional assignment would take me. What a ride!

In retirement, I have developed an interest in documenting our travels and experiences in photo books. Not only do I put pictures that we took on a trip into books, but I write a little bit about what we saw. Sometimes I have to use the Internet to remember what the

A baby Koala, Roberta and me.

tour guide said, but it is fun doing research on a cathedral or bridge and remembering what we saw. I like using Shutterfly for my photo books and their website lets me do the customization I want. I even figured out how to create a QR code, (one of those funny squiggly squares, which when read by an application on your phone will take you to a YouTube video that you loaded up from a trip). So now, in addition to pictures and stories in a book, you can scan a QR code and view a video. The one at the bottom of the page is of a hand cranked merry-go-round we came across in Paris. The quality is not great as it was taken with an early digital camera, but the memory is grand.

I've had a great career and life and will part with this message to my fellow members: Embrace new challenges – do your best, but always have fun and laugh, this from your local Cyber Warrior and Branch Web Master.