Growing up in Richmond, VA, Dudley did not have a specific career in mind but noted that he always wanted to do something to solve the problems of mankind. “At one point, I thought I would become a physicist, but as I got closer to college, engineering seemed a better way to work on challenging and important problems.”

One factor in his decision to become an engineer was Neil Armstrong’s walk on the moon. “That event had a big influence on a lot of baby boomers, and I like the depiction of engineers behind the television broadcast of the first moon walk in the movie The Dish—it reminds us that anything is possible once a problem is defined and engineers are put to work on it. The major problems of the world today (energy, environment, disease, food) can be fixed, given the necessary resolve, funding, and effort by scientists and engineers.”

Dudley spent his career at Zeta Associates, founded in 1984, which is in the field of signal collection and processing. When he joined as the 18th employee in 1987, Dudley was the second youngest there; currently, the company is about 400 strong. “I never wanted to get into management and was happy to work directly on problems in signal processing and communications, sometimes as a team leader, and more often as a systems engineer developing algorithms to collect and process signals.”

No support staff

“In the early years of Zeta, I performed systems engineering and technical assistance work for government customers, mainly performance simulation and verification for signal processing systems. Since we had almost no support staff, the engineers fulfilled those roles, and I was put in charge of our Sun computers. I also built our early open Internet web presence and built an internal classified web server to supply engineering documents and resources to the staff.

“I will continue in that role over the next three years until I retire at the end of 2017. At that time, I will move down to the Charlottesville, VA, area, where I have been offered opportunities to mentor/teach at the University of Virginia engineering school.”

Dudley enjoys outdoor activities including hiking, camping, sailing, scuba, and math puzzles, adding, “I enjoy the problems in The Bent.” He admits to once using a computer at work to solve a Brain Ticklers problem by brute force. He was grateful when the answer was printed in the next issue and says he found the published solution to be very elegant. Interest in puzzles is a tradition in Dudley’s family. His grandmother used to be a quilter and enjoyed making complex patterns.

He enjoys spending time with family: wife Barbara, who has an engineering degree and now teaches algebra; older daughter, Melissa, New York Gamma ’14, who graduated Cum Laude (BSEE) from Rensselaer Polytechnic Institute and is working on her Ph.D. at Cornell; younger daughter, Beth, who double majored in math and theater at University of Mary Washington and has worked at Wolftrap and Kennedy Center; and son, Paul, majoring in chemistry at Virginia Commonwealth.

When asked why he made a gift of $100,000 to endow the Virginia Alpha Chapter of Tau Beta Pi at the University of Virginia, Dudley explained how his attitude toward giving has changed over time. He grew up in a lower middle-class environment and was extremely frugal in his early years. He saved everything and put himself through the University of Virginia which provided him with the skills to build a satisfying career.

As he became more successful, Dudley discovered he had a giving heart, whether volunteering with the Boy Scouts of America, making financial donations, or giving blood at the Red Cross. About 15 years ago, he started giving more generously to the University of Virginia and TBP. After Zeta Associates was bought out, he found himself able to increase his philanthropy—with the chapter at his alma mater being recipient of an endowment providing yearly funds to the Association.

In September, Dudley met with the president of Virginia Alpha, Emily Nemec, to discuss the gift. Emily shared her vision for the chapter and her excitement about joining 500+ Tau Bates at the 2014 Convention.

Dudley’s advice for current students is “Don’t stress the small things. Assume the best in everyone at first, even if it means disappointment later. Treat everyone, no matter their station in life, with respect and kindness.”