



**Dr. Coke Stevenson Reed** received his PhD in 1966 under Dr. Hubert S. Wall at the University of Texas at Austin. Dr. Wall, a student of Dr. Edward Burr Van Vleck at the University of Wisconsin-Madison and post-doctoral student of Dr. David Hilbert at the University of Gottingen, worked primarily in the field of continued fractions. Dr. Wall influenced Dr. Reed's methodology of problem solving via a non-traditional means of teaching mathematics resembling the "Socratic Method." Dr. Reed conducted his postdoctoral study in topological dynamics under Dr. John W. Neuberger at Emory University. Dr. Reed's academic appointments have included The University of Texas at Austin, the Georgia Institute of Technology, Auburn University, the University of Colorado Boulder, and Princeton University. Dr. Reed has worked with numerous special purpose and general purpose high performance computers, including the first Cray supercomputers at the United States Department of Defense and the United States Department of Energy. It was here that Dr. Reed gained a thorough understanding of the importance of the relationship between a hard problem and the computer architecture needed to reach an accurate and timely solution. His professional career has included positions in the National Aeronautics and Space Administration, the United States Department of Defense, Los Alamos National Laboratories, and the Microelectronics and Computing Corporation. Dr. Reed's contributions to American national security were recognized in 1990 when he was awarded the *Exceptionally Meritorious Civilian Service Award Medal*.

At Los Alamos, Dr. Reed was working in physics and mathematics when he had the opportunity meet Dr. Stanislaw Ulam. Later Dr. Gian-Carlo Rota introduced Dr. Reed to Ulam's Problem 110 in the *Scottish Book*. In 1981, Dr. Reed's solution to that problem, co-written by Krystyna Kuperberg, was published in *Fundamenta Mathematicae* CXIV. In the tradition of academic competition and camaraderie, Dr. Ulam presented Dr. Reed with a bottle of red wine. It was Dr. Reed's solution to that problem that led him to rethink the way that data should flow through a computer. The Data Vortex network is illustrated here:

<http://www.datavortex.com/technology/>



Data Vortex Technologies is an American Limited Liability Company founded by Dr. Reed in Delaware, USA in 1997. It is unique as an American start-up in that it has received no venture or government funding. It is funded entirely by private individual investors, many of them scientific colleagues of Dr. Reed's throughout his career. Dr. Reed's small team includes leading computer engineers who have demonstrated the excellence of their work for the United States Department of Defense. Data Vortex Technologies, headquartered in Austin, Texas, has partnered with Plexus Inc., a global leader in engineering design and manufacturing. Plexus is currently building DV205 and DV206 systems in their Neenah, Wisconsin manufacturing facility. Larger systems will be available in 2016.

Presently Dr. Reed is working on next-generation designs to enable extreme scale computing. Using his mathematical knowledge to create a computer network capable of manipulating vast quantities of data, Dr. Reed's Data Vortex computers will free scientific research from the limitations of traditional computing. He has made significant strides in this effort over the past nearly 20 years as Inventor and Chairman of Data Vortex Technologies and is author of over thirty patents with global protection.

Dr. Reed's family played a large role in the German settlement of Texas in the mid-19<sup>th</sup> century. This will be his first visit to the land of his heritage and he is honored by the invitation to share his work with the German scientific community.