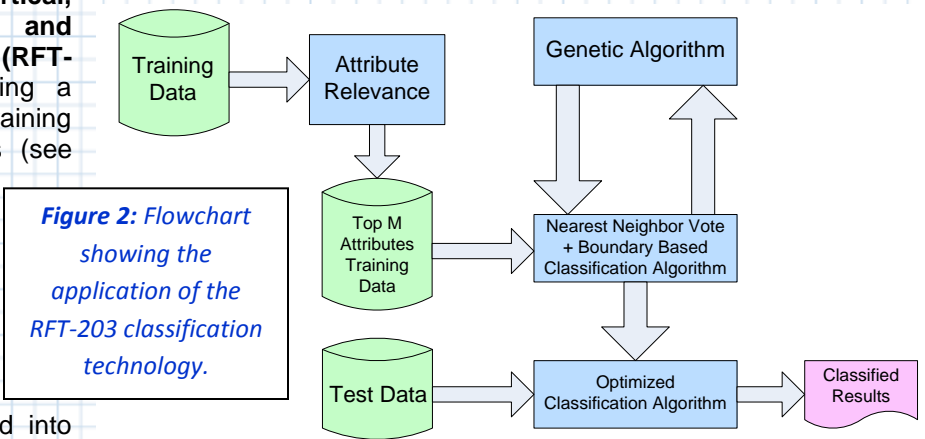




2. **Vertical Set Inner Product Technology (VSIP) with Predicate Trees (RFT-159).** This invention builds upon the data mining tree structure described above (in RFT-075) by then operating on the basis data tree structure with algebraic techniques to create clusters of related data items that can be easily analyzed. **This invention has one US patent pending and one pending PCT application.**

3. **Parameter Optimized, Vertical, Nearest-Neighbor-Vote and Boundary-Based Classification (RFT-0203).** A system of classifying a subject data item based on a training set of pre-classified data items (see Figure 2). A piecewise-linear approximation of a local boundary between different classes of data items is automatically computed. The local boundary is approximated by a neighborhood set of data items selected from the training set that have been pre-classified into different classes and have points similar to a point of the subject data item. **This invention has one issued US patent.**



## The Lead Inventor



**William Perrizo, Ph.D.**  
NDSU Distinguished Professor  
Department of Computer Science

Dr. William Perrizo is North Dakota State University Distinguished Professor and Fargo-Moorhead Chamber of Commerce Distinguished Professor of Computer Science at North Dakota State University. He received his Ph.D. from the University of Minnesota, Minneapolis, in 1972, his M.S. from the University of Wisconsin, Madison, in 1967 and bachelor's degree from St. John's University in 1965. Dr. Perrizo has over 200 refereed publications including over 50 journal papers. He has been a Research Scientist at IBM ABS in Rochester, MN, a Research Scientist at the U.S. Air Force Electronic Systems Division at Hanscom Air Force Base, MA, a Visiting Professor at the University of Minnesota, and a Visiting Assistant Professor at Oregon State University. Dr. Perrizo's expertise is in Database Systems, Data Mining, Knowledge Discovery, Distributed Database Systems, High Performance Computer Systems, Communications Networks, Precision Agriculture, Bio-informatics, and Remotely Sensed Imagery Analysis.

## Inquiries

Jonathan Tolstedt, Licensing Associate/Patent Agent  
NDSU Research Foundation, Fargo, ND 58108-6050  
Phone: 701-231-8173 Fax: 701-231-6661  
Email: [jtolstedt@ndsurf.org](mailto:jtolstedt@ndsurf.org)  
Web: [www.NDSUResearchFoundation.org](http://www.NDSUResearchFoundation.org)