



NonStop Collaboration / Networking Is Key to TANDsoft's Success

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The Passions of Jack Di Giacomo

Amanda comes first among Jack Di Giacomo's passions. Jack spotted "this beautiful woman" taking a squash lesson at his gym and asked the squash pro for an introduction. In that instance, Jack's boldness worked. He and Amanda were married in 1991. Twenty-nine years later, it remains the ultimate collaboration.

After Amanda comes Jack's passion for the Tandem computer. His initial introduction to what is now the HPE NonStop platform took place in 1984. Jack was a young developer at his very first job after college, and he fell in love with the firm's new Tandem. Thirty-six years later, Jack remains an ardent supporter of NonStop. TANDsoft Inc., Jack and Amanda's product development company, is a success story not only because of its NonStop-specific solutions but also due to the many networking and collaboration opportunities afforded TANDsoft within the close-knit NonStop community.

At home and at work, it's a family affair.

Say Hello to Jack's First Tandem

Jack attended Dawson College in the Canadian province of Quebec. There he participated in an intensive program designed to prepare computer engineering students for the workforce. At the time, the need for programmers and software developers was enormous. Companies sent recruiters to schools; and Jack was hired immediately by Montreal-based Financial Collection Agency (FCA) to work on their new Tandem system, purchased to

streamline FCA's collection efforts. The company did have other systems – NCR and Texas Instruments among them – but Jack was selected to work on Tandem because of his strong computer language skills. In college, it had been COBOL, PL/1, and Assembler. At FCA, he learned TAL – the original Tandem Application Language.

Like so many early Tandem developers, Jack started out on the platform because it was a job. But he learned to appreciate Tandem's innovative architecture and fault-tolerant technology, and he was fascinated by the origin story of Tandem and Jimmy Treybig. It was a great system for a young developer. In 1985, Jack left FCA and continued his NonStop career with Desjardins Bank, hired there as one of fifty-plus consultants on the payroll of ETI-NET. Jack eventually migrated to ETI-NET's new products division, where he contributed to the development of BCOM® and HCOM® as well as other solutions. He learned a great deal about product development and training, honing his skills at numerous ETI-NET installations.

By 1993, now the senior Tandem developer at ETI-NET, Jack took the leap into entrepreneurship and started his own company. That was TANDsoft, short for Tandem Software.

First Came TANDsoft, Then Came the Ditch

TANDsoft Consultants Inc. was incorporated in March 1993. It began as a consulting firm because it was a reliable means by which Jack could earn revenue. Jack oversaw the company's technical arm, and Amanda ran administration and finance. The goal, however, was to develop products.

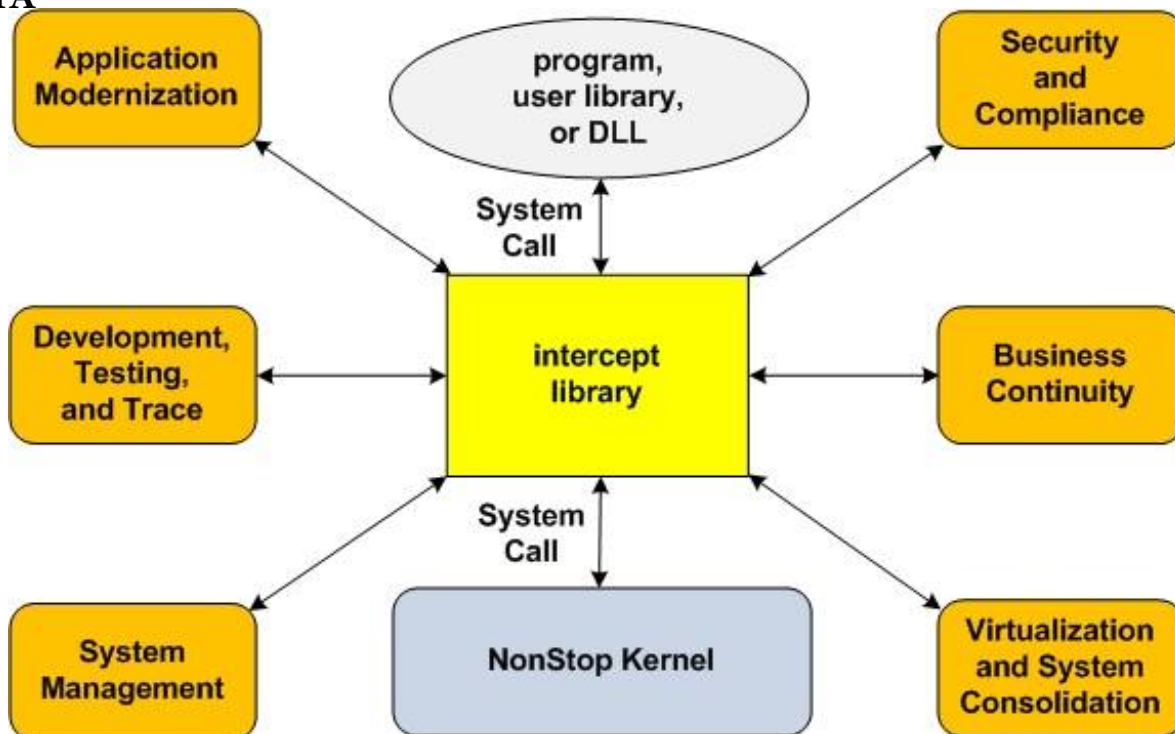
By the winter of 1996, the Di Giacomo household had expanded to include Phillip and Colin, two of their three children. Both Jack and Amanda were working fulltime in Montreal, he in consulting and Amanda at CSL (Canada Steamship Lines). They had moved from Montreal to its suburbs, thereby lengthening the commute. A typical day was similar to that of so many working parents. Get up, get ready, get the kids ready, drop the kids off at daycare, navigate rush hour, work, meet up for the ride home, navigate rush hour, and pick up the kids, often annoying daycare staff when they were late. After dinner, Jack spent time on product development while Amanda took care of the children and maintained the company books. Same routine the next day.

That all ended one winter morning when the Di Giacomo family hurried from the house, attempted to navigate their icy street, and wound up sliding into a ditch. As frustrating as such an experience can be, it was also a wake-up call. Shortly afterwards, both Jack and Amanda left their fulltime jobs and devoted themselves to TANDsoft. Within months, Jack introduced OPTA, his first product for NonStop.

Jack and Amanda's Excellent Adventure at ITUG

TANDsoft has exhibited at every U.S.-based NonStop conference since 1996. The company's initial foray into vendor participation was in Santa Clara, California. ITUG (International Tandem User Group) conferences were large back then and required sizeable convention-center space. Amanda still remembers their tiny 10×10 booth space completely surrounded by larger exhibits. They had only one product, OPTA, an online process tracer and analyzer for intercepting NSK system calls, the barest minimum of collateral, and no display. Just a few chairs, a table, and Amanda. Jack wasn't there much. Like a kid in a technical candy shop, he was far too busy running from session to session and networking with attendees.

OPTA



What Jack realized from his first ITUG adventure was that products like OPTA, a serious tool for software developers like himself, were not a hot commodity at a conference that catered to software users. Companies assumed at the time that Tandem, not 3rd parties, would provide the tools for in-house development. Clearly, Jack needed another product, one more attractive to the broader NonStop market. Thus, in 1997, TANDsoft exhibited at ITUG in San Jose, California, with not one but two solutions – OPTA and the new OPTA2000. It provides date & time and time-zone simulation for all HPE NonStop Guardian applications, OSS applications, and databases with no code changes.

TANDsoft is an Interception Specialist

Early on, when TANDsoft first became involved with product development, most businesses created in-house software that was custom-made for each company's specific needs. The source code for such bespoke solutions was readily available. Around the year 2000, the outsourcing of application development grew popular. As a result, companies lost control of the ability to modify their massive investments in off-the-shelf applications because source code was proprietary to the sellers and therefore was no longer accessible.

How do you modify and modernize applications without source code? The answer is with interception technology. It enables the seamless capture of a variety of system and database calls in order to enhance application behaviors. The result is the creation of new application functionality without the need to make source code changes, of particular importance when the source code is unavailable.



Click the image to read article.

TANDsoft specializes in interception. It can be challenging to create interception products and even more challenging for Jack to explain the technology to business managers and others who don't dwell inside the guts of an application. What he has learned is to focus discussions instead on interception benefits, which according to Jack are limitless. In his Connection article "Interception Technology Enhances Application Functionality," Jack discusses how intercept libraries can be used for many purposes – debugging, tracing, application monitoring, statistics collection, testing, replication and synchronization, encryption and tokenization, virtualization, etc. All are examples of seamlessly enhancing an application by extending its functionality beyond its original purpose and beyond the limitations of its source code.

Numerous solutions within the TANDsoft product suite are based on interception technology. Among them are OPTA, TANDsoft's original product. It is an interception solution for developers. OPTA allows them to write custom code that easily extends the capabilities of all HPE NonStop applications and includes a variety of interception and trace utilities. OPTA2000, Sensitive Data Intercept (SDI), and other TANDsoft products are packaged solutions that can be adapted to the needs of the purchaser. OPTA2000 uses intercept libraries and virtual time containers to provide simulated dates and times and simulated time zones to applications and databases. It permits existing backup, development, and production systems to support worldwide consolidated applications.

OPTA2000 eliminates the need to change system clocks in order to test time-sensitive environments. It also supports multiple time zones on a single server. Sensitive Data Intercept (SDI) protects sensitive data-at-rest by intercepting NonStop database access calls, encrypting data written to disk, and decrypting data read from disk.

Many TANDsoft Products Evolved from NonStop Networking

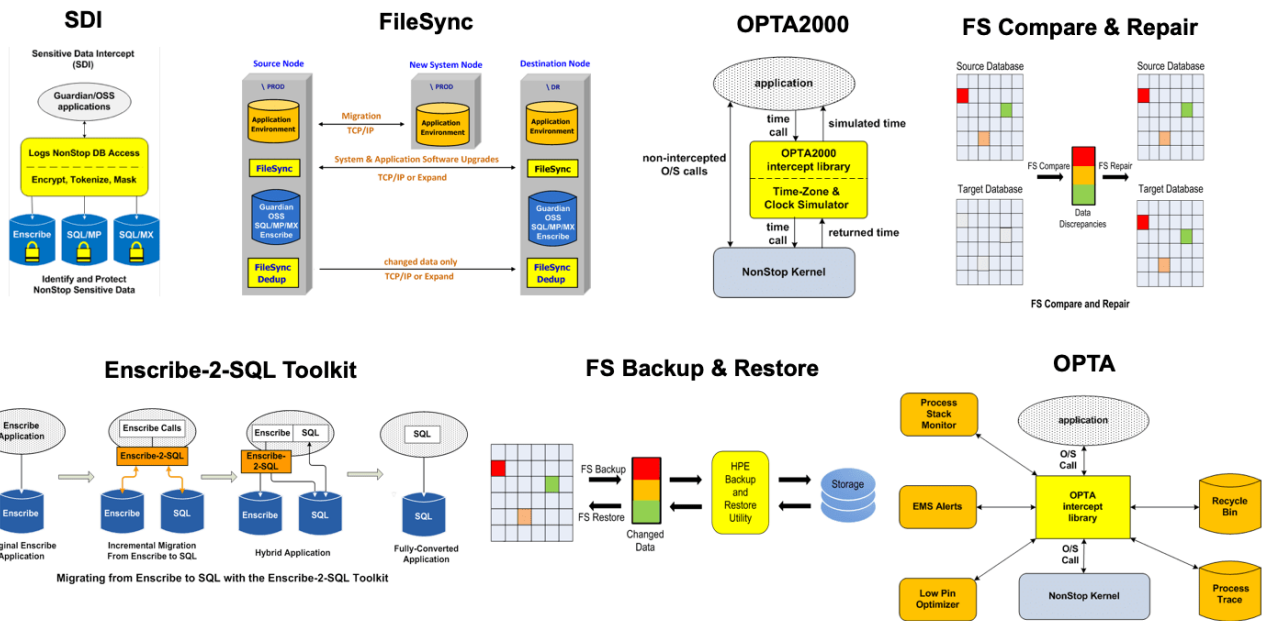


Whenever Jack and Amanda attend NonStop events, be they the NonStop Technical Boot Camp, Connect chapter meetings, HPE Partner symposiums, virtual gatherings such as the new VIRTU-NUG, or others, the greatest value for TANDsoft has been the ability to network with attendees and to collaborate with colleagues in the creation of new products. There is a real family feeling to NonStop events. Over the years since their first ITUG conference, the Di Giacomos have made many friends. They consider collaboration and networking to be the backbone of NonStop events, and Jack asserts that some of his best product ideas came from the suggestions of customers and partners.

Amanda may not be technical, but she is adept at drawing from attendees a variety of information about their unmet technical needs.

As examples:

FileSync – automatically monitors, replicates and synchronizes application environments and non-database files (edit, objects, source, ACL, blobs, OSS, SQL/MP, SQL/MX) across HPE NonStop servers. It reduces the errors associated with maintaining duplicate system and application environments. The idea for FileSync came from an existing TANDsoft OPTA2000 customer who had a need for a file synchronization solution. Jack decided that if this company had such a requirement, others would as well. It didn't take long for Jack to develop FileSync. He is a great believer that programming is all about shortcuts. He incorporated building blocks used previously to produce other TANDsoft products, integrated within FileSync the equivalent functionality, and voila! Years after its introduction to the NonStop marketplace and after data deduplication and several other features were added, FileSync remains one of TANDsoft's flagship products.



SDI – the idea for Sensitive Data Intercept was born at a SunTUG chapter meeting. Another vendor had a tokenization/encryption product that worked for Enscribe files only. Jack believed that such a product could not exclude SQL/MP and SQL/MX. Always in the hunt for an opportunity to create another interception solution. Jack assumed the challenge of developing an MP/MX component. SDI was the result. Today, it is embedded in the other vendor’s product and also is available for use by individual NonStop customers. <https://bit.ly/2P7oUxC>

FS Backup and Restore – a new TANDsoft product is FS Backup and Restore. A partner who attended the 2019 NonStop Technical Boot Camp had a customer who wanted a better way to perform backups. The customer’s backups were immense, took hours to complete, and were creating a host of troublesome challenges within its processing environment. With existing expertise in such areas as replication and deduplication, Jack developed FS Backup and Restore. *FS Backup* detects file data-block modifications and archives only the changes. The result? Backup times that normally may take hours are reduced to minutes. *FS Restore* then can retrieve the saved file data-block modifications and will apply the changes to rebuild the original file.

FS Compare and Repair – Sometimes lightning hits twice. Shortly after the 2019 Boot Camp came the idea for a new compare/repair product. A longtime TANDsoft partner mentioned to Jack that the technology used to identify block-level differences could be applied perhaps to yet another solution. Out of that discussion evolved TANDsoft’s FS Compare and Repair. It identifies, reports, and resolves inconsistencies in live and offline databases and is the most rapid compare/repair solution for use in the NonStop environment.

The FOUR2000 Consortium – Talk About Collaboration

For decades, applications had employed a two-digit date field. The year 1983 was simply stored as '83. In earlier days, memory was expensive; and any savings in memory were actively pursued. The two-digit data field worked fine until we approached midnight on January 1, 2000. For instance, wouldn't the year 2003 be treated as 1903? It was a developer's nightmare. Massive effort went into reprogramming applications to move from a two-digit date field to a four-digit date field. Everyone was terrified that in the Year 2000, all their systems were going to crash.

Out of this concern came the formation of FOUR2000, a loose partnership and collaboration of NonStop partners that provided a single source for Y2K repair needs. The consortium offered a specific project methodology, a complete set of software conversion tools, and experienced resources to fix Year 2000-related problems. TANDsoft was one of its members.

FOUR2000



- LEARDATA Info-Services, Inc. – *Application Repair Methodology for the Year 2000*. This tool performed a business and technical impact assessment and prepared a detailed project plan.
- Question Incorporated – *Q2000* helped determine the project's scope and identified every line of code to be fixed.
- Softsell Business Systems, Inc. (Now Ascert, LLC) – *VersaTest* simulated the production environment for integration testing.
- TANDsoft Consultants Inc. – *OPTA2000* identified and tested application procedure calls to system time and date functions without having to modify the operating system time and date.

Also participating was The Sombers Group, which provided ongoing application development to enhance applications while maintaining Y2K compliance.

OPTA2000 was developed to meet the challenges of Y2K. Originally, the product served as a clock-simulation tool that provided the ability to change the time and date of an application for testing, development, and maintenance purposes without having to change the system clock. <https://bit.ly/2EoTeSe> / <https://bit.ly/2EtP7V3>

When OPTA2000 first was introduced in 1997 at an ITUG conference, companies were interested but had not yet arranged for Y2K planning and testing activities to be added to their budgets. The costs, especially for testing, were going to be enormous; and the effort was extensive enough that it would require the full support of corporate management.

As the Year 2000 neared, interest turned to panic. So desperate were companies to complete Y2K compliance that Amanda would receive unexpected purchase orders via fax from companies who needed OPTA2000 but who had not previously contacted TANDsoft. Jack attributes several of these OPTA2000 sales to his involvement with FOUR2000.

Collaboration counts.

What's Next for TANDsoft?



The children are grown now. Phillip is 27, Colin is 25, and Emily is 22. Bear the dog isn't interested in a TANDsoft career. Neither are the kids. But Jack, Amanda, and their team aren't searching for successors. There are still too many NonStop products to create, too much still to learn, and too many opportunities to collaborate and network. The platform has been good to TANDsoft; and in the thirty-six years since he first was introduced to a Tandem, Jack's passion for NonStop remains.

So does his passion for Amanda. As both life partners and business partners, they have successfully created for themselves an extraordinary work/life balance. They share a Di Giacomo family and a NonStop family. Together they hike, bike, ski, kayak, and camp. Jack likes to golf. He plays ice hockey and is nuts for the Montreal Canadiens. Amanda plays tennis and is an accomplished equestrian.

When you have an ultimate collaboration like that, why look for a change?



Since 1993, TANDsoft has been a global provider of innovative HPE NonStop software solutions for use in time virtualization, security, data replication, and application modernization. We specialize in interception technology, which allows our NonStop customers to enhance their legacy application functionalities without the need for program modifications. TANDsoft's innovative products are easy to install, easy to use, and are backed by exceptional support. They include FS Compare and Repair, which identifies, reports, and repairs inconsistencies in production NonStop databases; FS Backup and Restore, which accelerates HPE Backup by identifying and saving only block differences, not whole files; and Sensitive Data Intercept (SDI), an intercept library that works with HPE, third-party, or in-house security solutions to protect sensitive data-at-rest (Enscribe, SQL/MP, and SQL/MX) by encrypting/decrypting data

written to and from disk. Yet another product is FileSync for automatic file synchronization, replication, and data deduplication. Within the NonStop community, TANDsoft is the sole source of time-zone virtualization and clock simulation tools (OPTA2000) for use in consolidated IT environments. For more information about these and other TANDsoft solutions, visit www.tandsoft.com; or contact the following: Jack Di Giacomo (+1 514-695-2234 / jack.digiacomo@tandsoft.com); Dieter Orłowski (+1 303-263-4381 / dieter.orłowski@tandsoft.com); and Tim Dunne (+1 402-216-7402 / tim.dunne@network-tech.com).

About Janice Reeder-Highleyman

Janice Reeder-Highleyman has produced technology articles and marketing content for decades. She's not really that old, but she has been busy. Having served as chairman of the International Tandem User Group, Janice also has volunteered in numerous capacities both for ITUG and for Connect. In her spare time, Janice is a hiker, a kayaker, an avid Alpine and Nordic skier, and a flight instructor. If you want Janice to teach you how to fly, move to New Jersey. Otherwise, you can live anywhere and still contract her marketing and writing services via 908-459-8363 or jreederhi@gmail.com.