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Why I started KAM Industries

There is something magical about running trains on a circle of track and seeing the train run. I just wanted the trains to do more. My first train set was Lionel HO. I liked the action cars, and the visual interaction on the layout. I still have my original Lionel HO set, but have been lucky to add to the set over the years, and have just about every action car that was produced in the pre-general mills acquisition of Lionel. I have always wanted to computerize my model railroad. I just wanted my trains to do more.

My vision was to add computer control to my model railroad, where I have a wireless throttle to control my layout. At the same time, have a pre programmed train running on the layout. I wanted to use a computer running as a collision avoidance system to control the automated trains. This allows me to run my train, while the computer runs 3 or 4 other trains on the layout.

Visions are what drives us to get up in the morning and to do things that no one else has achieved (or thought was possible). Vision drives us to innovate where others copy those that innovate. My vision has driven me over the years to learn new skills, implement new ideas, build products and be open and exchange information with users as peers. I founded KAM with this principal, and designed "The Conductor" to exchange information between our users, with the purpose of creating *Software products for the Digital RailRoad™.*

KAM Industries History

KAM Industries was founded in 1991. KAM Industries is an independently owned consulting company that develops software and tools for our customers. During our off time between projects I develop model railroad software.

I wanted to develop a set of standards where software can be exchanged between users, and to provide the industry with a common software standard to operate their model railroads. I wanted to create a set of software interface standards that reduces the software time to market, and allows innovation to flourish. I wanted to give those standards to the NMRA so all developers would have a common interface to build software.

KAM's first software product was **Engine Commander** for the **Marklin** command stations. I still have a copy of Engine Commander 1.0 that I produced back in 1991 for windows. It is amazing how KAM software has evolved since then.

All developers are faced with common tasks that are repeated over and over again. KAM's software is designed to address this duplication of effort. To facilitate this, in 1993, I joined the NMRA working group and contributed to the establishment of the **DCC (Digital Command Control)** standard for the embedded control protocol for the locomotive.

DCC established a way in which all manufacturers can use the same components on the model railroad. Myself and Ken Rice (another member of the working group) working with the NMRA committee developed the NMRA serial command station interface. This interface led to the common command station protocol that soon become the de-facto ASCII standard interface for computers and command stations. NCE (power house pro) and EasyDCC use a version of the interface protocols in there command stations today, but are finally moving to a binary protocol.

At the NMRA Convention and national Train show, Ken West and myself introduced Train Server concept, along with the **proposed NMRA programming API**. The programming API was the first multi user, multi programmed interface that allows developers to create software applications that are not tied to a

manufacturer's command station hardware. The API an innovation at the time and addressed many issues that modelers had about operating systems interoperability. The proposed NMRA API could easily be ported to different processor architecture. The NMRA API's is still included in KAM's software products today

Train Server Overview

Train Server was established as the programming standard overnight. Later KAM established another first, by releasing the first model railroad CDROM. KAM software CDROM included the necessary software to install KAM's application as well as the video tutorials on how to use the product. The software CDROM was placed in Model railroading, as well as Nation Train show convention bags for the next couple of years. KAM's goal was to foster new development ideas to grow the hobby. KAM has always felt that to grow the hobby, a standard needs to be developed – hence the proposed NMRA API.

Since the Train Server introduction KAM has shipped over 100,000 CD-ROMs to end users and developers. Train Server is such an innovative and unique programming environment that numerous patents (see footnotes on this page) have been granted to KAM both in the United States, Germany, Great Britain, Canada and other countries. Over the years, we have added functionality and implemented are patent technology in Train Tools as the US and international Patent office has granted them. New software and computer technology always appear in Train Tools products, before it is copied by other model railroad software manufacturers (either commercial or open sourced).

KAM's software programs are categorized into three different types of applications. these are Manual control, Layout automation and Dispatcher operation. Each of these classes of applications are different, and require different types of capabilities to operate and control the model railroad. KAM's philosophy is foster the development of simple applications, that solve the modelers problem, instead of with a do everything solution, designed by committee, complex to operate, and designed on obsolete programming tools such like java or turbo pascal. KAM' software is open and extensible as compared to any other commercial or open source solution.

KAM's Software Overview

KAM Industries was incorporated in 1998 as KAMIND Associates, Inc. KAMIND has extended the Train Server architecture adding Microsoft networked COM/DCOM protocol support and the support of Commercial Dispatcher control application from Train Track. **Train Track** developed the Windows NT version of software called Track Driver Professional 32. KAM, along with Train Tracks extended the software application to support the NMRA DCC protocols using Train Server. These extensions were the first time Train Track's software was intergrated into Microsft DCOM architecture.

Later, KAM Industries expanded to Europe with inclusion of **Computer Dispatcher Lite** as part of the KAM's software product line. Computer Dispatcher Lite was designed for the automation conscious model railroad customers, and is a port Bouwens Engineering's Train Wizard. Computer Dispatcher Lite was later renamed to Layout Commander® software to reduce the confusion with Computer Dispatcher Pro. Computer Dispatcher pro is a professional dispatching program, while layout commander is a Layout Automation program. The difference between these applications is that Layout Commander has locomotive control. Computer Dispatcher Pro is a dispatching program.

Classic Panel® software was designed to fill in the missing software component for manual operation. The software was originally designed using Sun Java language, and was designed from a 1940's Great Western Dispatchers panel. This software product was never released. After Microsoft stop supporting the java language in all of its products, the java version of classic panel was canceled.

Classic Panel was rewritten from the ground up to support the .NET runtime to improve performance and to allow portability to the handheld devices. Classic Panel version 3 was released in Winter of 2004. (Classic Panel version 1 and version 2 were never production released). Classic Panel 3 incorporates GUI editor,

APB and ABS signals, 2 color aspects, and full interlock support. Classic Panel is the next generation 1940 dispatcher panel designed for the modeler. Classic Panel integrates new signal technology, distributed network support, location information and portability to the Windows CE PDA devices.

Classic Dispatcher Panel Overview

In 2003, Train Server reached another milestone: support for the first full duplex wireless hand held throttle using Microsoft Windows CE devices, called **Loco CE®.** Loco CE integrates commercial computer Windows CE - PDA products into the model railroad environment using off the shelf computer equipment. Loco CE is the OEM software product included in Lenz Set LI in the United States.

In late 2003 KAM introduced the **distributed XML communications protocol** designed to allow distributed model railroad clients to operate over a remote network using TCP/IP and the XML data/command protocol. The Train Server Architecture clearly extends the boundary on what can or cannot be done to support the end user and developers.

In 2004 KAM introduce The **RailDriver Commander®** remote software supporting the RailDriver computer based throttle and full scale simulators running model railroads. Rail driver interface is unique where the interface can be local to the user system, or remote across the internet using Train Server XML protocol. KAM's Train Server architecture supports the demands and performance of a user-to-hardware interface that is unique in the industry.

Our focus in 2005, was to migrate all of the client software to a new set of developer tools that are XML and .net based. Along with the 2.0 software, we released our new Train server sdk kits, with Visual studio 2003 templates. This new tools allow users greater flexibility in developing model railroad applications using Microsoft tools like Visual Basic .net Express.

As part of development effort in 2005, we Introduced Train Server release 3.0, and addressed the problems areas associated with the developer interface and the tools sets required to build Model railroad applications. In June 2005 at the Cincinnati convention we Introduced Decoder Commander. The first XML based distributed programmer. This application has been under development since 2001. After many user beta testing and UI changes we new we had a hit.

What will 2006 bring? we are looking at more software enhancements to our products. I have expanded our download site where users can now download the complete CDROMs online. We are planning a new release of CDPRO in late 2006 that will address compatibility problems with Windows Xp and Vista. Wth time permitting, I have some additional new products to announce.

But in all of this, my goal still remains the same - provide our users with excellent software to run your digital railroad and have fun. After all, that is goal for all of us.

KAM Product Overview

Site Statistics:

Vistors in 2006: 67,453
Hits in 2006: 1,311,653
Page Views in 2006: 162,962

Vistors in 2005: 118,582
Hits in 2005: 2,059,788
Page Views in 2005: 258,502

Vistors in 2004: 107,122
Hits in 2004: 1,825,750
Page Views in 2004: 1,402,272

This site has served 1,823,736 pages since August 2004

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