NMRA
Mid-Central Region
Kentucky Division 10

Club T-Trak System

Business Case

January 20, 2016

As a result of a very successful Regional Convention in May 2015, the Board of Directors appointed Bruce DeMaeyer to identify and prioritize several community outreach project that will grow the Model Railroad hobby in the Lexington, KY area.

The projects identified thus far (in their order of priority)

1. Developing a strong youth program involving the Blue Grass (Lexington) Boy Scout Council. **(This Project)**
2. Develop a proposal to join with the Bluegrass Railroad Museum and help build a Freight House at the BGRM site in Versailles, KY (Ongoing)
3. Develop a proposal to join with the newly modernizing Old Lexington Courthouse (Ongoing)
4. Restart the long-term void caused by an earlier decision to discontinue the Division Annual Train Show (Ongoing)

Background
Most model train enthusiasts began their love of the hobby when they were in their early teens. This usually involved the help and assistance of the youngster's father or other close family friend. It was usually a strong bonding event.

Today's youngsters are (unfortunately) more preoccupied with hand held digital devices playing computer games or providing endless concentration on the various social networks accessed by their smartphones.

The Boy Scouts of America is one of the nation's largest and most prominent values-based youth development organizations. The BSA provides a program for young people that builds character, trains them in the responsibilities of participating citizenship, and develops personal fitness (including manual skills).

For over a century, the BSA has helped build the future leaders of this country by combining educational activities and lifelong values with fun. The Boy Scouts of

America believes - and, through over a century of experience, knows - that helping youth is a key to building a more conscientious, responsible, and productive society.

Scouting has touched the lives of many youth and adults across America. More than one in 10 boys (11 percent) in the United States is currently a Scout, and an additional 23 percent have been Scouts at some point in their lives.

Boys who are or were Scouts have been in the program for an average of nearly five years. By the time boys reach adulthood, 54 percent have been in a Scouting program at some time in their youth.

On average, men were youth members of a Scouting program for four years; however, 42 percent stayed in Scouting for five or more years.

Division 10 is proposing that it become the driving force in the development of the Boy Scout Model Train Jamboree.

Pinewood Derby History

A preceding Cub Scout program called the “Pinewood Derby” has been in existence for many years. The first pinewood derby was held on May 15, 1953 at the Harmer House in Manhattan Beach, California by Cub Scout Pack 280C (the present Pack 713. It was developed because Cub Scouts were too young to participate in the popular Soap Box Derby races, so the developers came up with the idea of racing miniature wood cars. The cars had the same gravity-powered concept as the full-size Soap Box Derby cars, but were much smaller and easier to build. The idea spread rapidly, and competitions were held across the country, mainly with recreation departments and nonprofit organizations including the Los Angeles County Department of Recreation. Of all that early enthusiasm, however, only the Boy Scouts of America made it part of an official program.

The Scout is given a block of wood made of pine, four plastic wheels and four nails. The finished car must use all nine pieces, must not exceed a certain weight (usually five ounces must not exceed a certain width (usually 2-3/4”) and length (usually 7 inches) and must fit on the track used by that particular scout pack.

Blocks can be whittled with a hand knife or a bandsaw or Dremel carving tool for major shaping. Decals can be bought at scout shops or hobby shops. It is also possible to use standard model decals to replicate actual racing cars such as Richard Petty's 1970 Plymouth Superbird. The original style is based on open-wheel cars; however, fender or body kits are available, or wheels can simply be placed outboard of the body.

Other than the previous basic design rules, the Cub Scout is able to carve and decorate the car as he chooses. Many Cub Scouts also add weights to the final

design to bring the car to the maximum allowable weight; coins, glue-in lead pieces, and melted lead are common ways to add weight,

Cars typically vary from unfinished blocks to whimsical objects, to accurate replicas of actual cars. Graphite is usually the only lubricant allowed, and it often helps to polish the provided nails.

The idea behind the pinewood derby is for the parent, usually the father, but occasionally the mother or grandparent, to spend time helping the child design, carve, paint, add weights, and tune the final car.

Railroad Jamboree Proposal
Building on the success of the Pinewood Derby for the older age Boy Scout, the Division 10 proposal is to develop the existing concept of T-Trak Model Railroad Building into the scouting program.

This proposal recommends that the Division institute the development of a T-Trak modular model railroad system to be used to grow the skills of Model Railroad building in the Lexington Area,

Working with the Blue Grass Boy Scout Council and the many Scoutmasters around the area, a Council wide program would be developed to provide a Father/Son program of building a module that can be brought to an Annual Railroad Jamboree for a fun day of attaching the Scouts module to the Division's T-Trak system and running trains across everybody's modules.

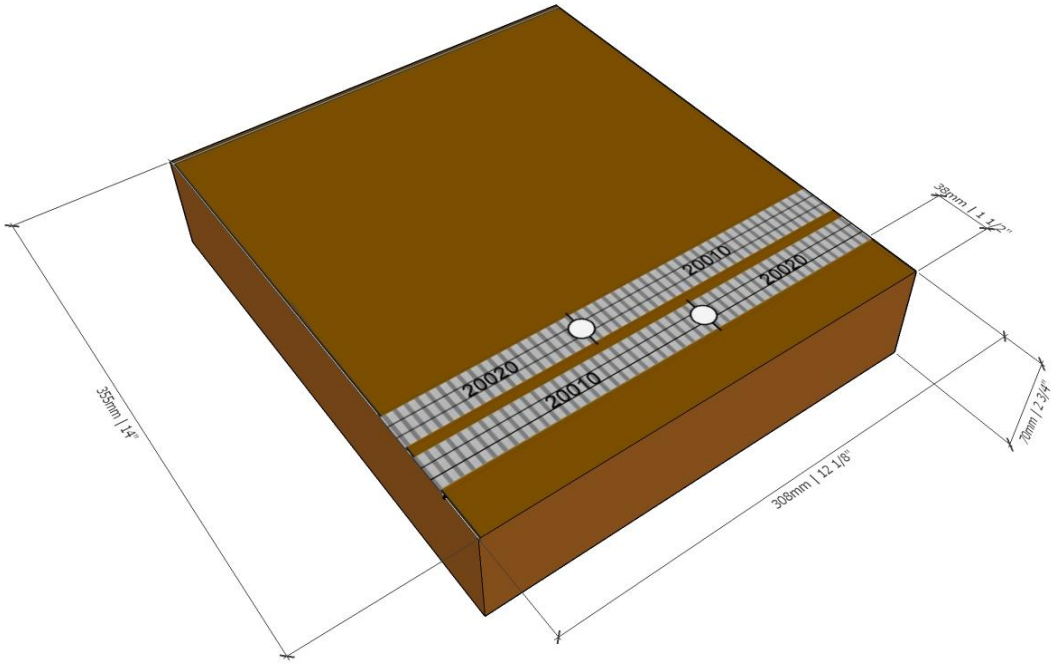
The Jamboree would be held in Mid-April near the end of the school year. During each additional year the scout is involved in scouting, the same module could be enhanced or an additional module could be created by the scout.

Let's understand the T-Trak System a little Better
T-TRAK is a modular model railroad system based on a few standards for module size, track placement, track interface, and electrical connections. The minimal standards allow for a wide range of flexibility in design yet still maintain interoperability with all modules built per the standards. The popularity of T-TRAK is worldwide allowing for modules from all over the world to connect together.

T-TRAK modules are dioramas with sectional track, specifically Kato Unitrack, that snap together to create layouts from a simple circle to large complex layouts. The modules are designed to fit on tables but could just as easily be setup on any flat surface from the floor (yes, even around the Christmas tree) to taller benchwork types, typically a folding conference or library table.

Layouts are easy to assemble and even easier to disassemble for those that do not have permanent space for a layout. The convenient size of the modules

make them easy to store on a shelf or in totes when not in use, or to transport should the need arise. T-TRAK is the logical next step in model railroading.



Example of a module

Modules in a layout are not clamped or bolted together in any fashion. The **only thing** that holds the modules together in a layout are the Kato unijoiners.

It is acceptable to use track from other manufacturers between the Kato Unitrack interfaces, however, most T-TRAK builders use Kato Unitrack exclusively on their T-TRAK modules.

Builders must ensure the trackwork on their modules will not cause issues while running trains. The first time T-TRAK builder is advised to use Kato Unitrack exclusively on their first few modules.

The use of Kato track created an early "informal" standard for the length of track on a module to be 308mm (which is 12.2"). A module of this size is typically referred to as a "single". A module with 620mm of track is referred to as a "double". Naturally, those with 930mm of track (3 x 310mm) are known as "triples" and, yes, there are "quads" (4 x 310mm) and even longer T-TRAK modules, but they stray from the small, easy to store, easy to transport tenets that make T-TRAK attractive. It is advisable that all track on straight modules be built as a multiple of 310mm units of track for reasons of compatibility.

While a non-standard length T-TRAK module can be constructed, the builder should recognize that doing so may limit the usability of that module in a multi-person, multi-club layout.

There are multiple ways to build a T-TRAK module but the most common is the box method. This is basically a lidless, inverted box. For a module of single length (i.e. 310mm of track), the box should be 308mm (12 1/8") wide. This gap provides for 1mm of track overhang on each side of the module. This 1mm overhang (or more) is part of the formal T-TRAK standards. It was implemented to allow flexibility with connecting to other modules that may not be built squarely, or for those that warped or flexed. The formal standard height of the module is 100mm (4") and leveling bolts are utilized to accommodate uneven tables.. The height measurement is from a flat surface to the base of the Kato track.

The general consensus among the T-TRAK community is that a module should be no deeper than 355mm (14"). In a typical double row, oval layout this permits a small gap between the backs of modules and also ensures that an oval layout will fit comfortably on a standard 30” wide folding table as found in many public venues.

It is very OK to build a large module as a set of sub-modules with non-standard interfaces (track in different places, non-Kato track, etc), as long as the ends of the collection meet the outside edge interface standard. For example, you could build a huge yard cut into 2 foot sections, with “non-standard” interfaces between the sections, but the standard Unitrack ends where the yard connects to the rest of the layout.

Module Kits
The division should create a construction plan for a Father/Son team to build the modules using power tools at home. If power tools were not available, the possibility exists to buy precut kits (~$10) and then assemble then according ot instructions. Assembled kits (not recommended) are also available for ~$25. These kits are available from a company called T-Kits on the web at

http://t-kits.com/

What does the Division Need to do?
Division 10 needs to supply and build the T-TRAK starter layout This system would consist of four corners and two single modules. **These modules would be purchased and owned by the Division.**

In addition, the Division would need to purchase a basic DCC power system that would power the system.

Participating members of the Division will take the six modules and provide some basic structure and scenery on the module demonstrating the “art of the possible”.

The construction should not be so elaborate as to discourage the novice from beginning his/her module.

Proposed Capital Budget for the Division

1. Wood and supplies for the 6 modules (precut by Bob Belt)	$150
2. Storage container for the six modules	$50
3. UniTrack	$40
4. DCC Command Control Digitrax DB150	$126
5. 12volt Power Supply	$25
6. LocoNet Interconnectivity	$50
7. Throttle	$56
8. Tote Box for power system	$15
Budget Total	$512

Sweat Equity for the Division Members

1. Building and "sceniking" the six modules. Scenery will be provided by the building member. The building member would be donating the materials used (including structures, etc.) to the Division and the *whole completed module* including all scenic elements would be Division owned.
2. Building the power supplies and LocoNet wiring

Administrative

Discussions should begin in earnest with the Blue Grass Council Boy Scout senior organization to develop this plan for inclusion in the 2016/2017 Council Program. These discussions should be led by Bob Belt and Mark Underwood.

Time frame

Have the modules built in time for Mark Underwood to use them as a prop for his clinic on March 6, 2016 They do not need to be "sceniked" for the Division meeting.