Our Next Generation of Operations

By R.G. Blocks

I’ve personally enjoyed each of the methods employed by the TR-C&NW for dispatching and running our rail operations. We’ve gone thru a series of phases each lasting a year or more. Each phase of our operations has involved more detail and paper. I cannot say that all participants have shared enjoyment. Learning by doing is always an adventure. We’ve thus begun anew. We are into a new phase. This is how we are getting started with JMRI.

Neither or kids, grandkids or railroad knowledgeable adults are crazy about lots of forms to shuffle. I was never pleased about the time it takes to organize an operating affair. This, we hope is a better way.

Sunlight comes after the dark cloud passes. My wife’s open-heart surgery caused a four-month detour to our family plans and hobby activity. I’d finished the required hours of experience but not all paperwork for Chief Dispatcher AP and would not have much time to work on the TR-C&NW or AP paperwork during late winter.

We’d be near Milwaukee doctors and quite nicely close to Rolf Plachter (Midwest Lines RR) where I’d operated with Scott Brochhausen, Burnell Breaker (Belle City Division of Lionel Lines), Phil Bayuk (Oz Lines) and Don Strike’s (Great Northern). It seemed that seven out of eight layouts that operate regularly in SE WI had converted to JMRI, an Open Source form of computer software. I became hooked.

I’m going to describe what it took to go from zero knowledge of JMRI to operations that should work for you as well. The cost will be in your time and effort as opposed to dollars. In a couple of years we’ll know whether I’m giving you a good steer.

Your computer needs a complete Java Suite of current vintage. If not then get one. Then, download JMRI PanelPro software. JMRI instructions provide for a complete animation panel or signaling system. There do not seem to be instructions for a middle ground. I stayed simple with the help of Scott and Phil (see above) who are believers and have helped others in SE WI get setup. We will not cover creation of an animated panel or signaling: perhaps some other time. I would like to thank both of these gentlemen for their considerable knowledge and help.

We will not use the Layout Editor in our approach. We’re going to create an open loop system. JMRI software will create your trains, pickups, drops and prepare all the operations paperwork. It is not tied to your layout. There is nothing to wire. If you actually stop operating before the planned work is complete then simply move the train software to where it is on the layout and the next time you operate: start there. We’re out to capture the cream of dispatch without all the bells and whistles.

Make a very simple sketch of your layout from one end to the other. A starting location and a finish location and a few locations in between are all that’s needed. If you have more than a couple of handfuls of locations you’ve become too complex. We ended with six locations. A simple one-line schematic on scratch paper suffices.

We need sidings where cars come from and go to. These are spurs. Avoid including passing tracks as places to put cars. I had some ‘do-over’s’ in this regard. Our layout boiled down to sixteen sidings where we have client businesses. Each client location is shown as one (44 ft) or two cars (88 ft) in length for a typical business on that siding. I made note of what kind of car was appropriate at that location. Some sidings were defined so several cars types could be placed there. In total I came up with 5544 feet of sidings by measure. They held 117 forty ft cars when absolutely full. I was told that I should populate my railroad with about 50% of the siding capacity or no more than say 58 cars.

Click on the pull down called Operations and choose the menu called Settings. There, enter your layout name, a direction, a gauge, and a maximum train length (forty foot cars are 44 feet with couplers). I chose one loco per train (a starting point) and
6 minutes for a switch. Car types would be descriptive (for visitors benefit) and my unit of measure would be feet (scale feet not real ones). Check the box called Add Operations to Menu to Main Menu and go no further (below that line starts Panel Options which you can do if desired later).

Below is a copy of our Settings. Simple? Sure. Do it now and computer step one is done. No big deal.

![Operations Settings](image)

Our layout starts at NewJamestown the west end of the line, then goes to NewThomasDivn, NewOutaSiteDivn, NewMtLauraDivn, NewMtAnnaDivn and finally to NewMtLauraTerm the east end of the line. Six locations, not the fifty I’d started with (giving them names like ThomasDivn). Our Locations have the superfluous prefix ‘New’ to avoid duplication when I simplified. Locations need unique names.

Backup your work frequently. It is one of the options. Next time we edit our Locations we will change the names to eliminate the prefix ‘New’. Simplify.
Select applicable cars types from the list. Put cabooses on a spur near where you are making up trains. We recommend you eliminate or disallow (uncheck) cabooses, passenger, baggage and engines from all but one or two locations. It simplifies.
Within NewOutaSiteDivn we have a transfer operation to a sister railroad. So one siding (S112) acts as the T&O Railroad Interchange. I've shown that we allow all types of cars. We have spurs for each business or interchange at a location. The software requires that you Add the spur by giving it a unique name then edit the content (car types) and Save it. Simple you bet.

Next we provide some cars. I've currently defined 39 of them as you see on the Cars tableau below. To add a car click Add and a tableau comes up. Give that car a unique number, color, and place it where you want to start out with that particular car. It can be a yard, or spur, or stage track. Mine are currently where indicated on the cars tableau. Any number of our cars have moved while others have not. The computer software decided each move.
Forget specifying Locomotives. Simply do not require engines in your use of this software. By so doing we can spot have engines anywhere to help our road engines at various yards. I did specify mine (as shown next); however, they don’t move since no location was specified. If you feel compelled (like I did) you can add Locomotives later. I wasted time both here and at locations.
Below next, we created four Routes to serve as our initial trial routes. They are analogous to routes we had created for our pre JMRI car cards.

It seemed prudent to start with a few routes and see how they worked before adding many routes and potential complexity. I'd already both wasted time and screwed up my location names. We need not waste more time.

Below enter the location and state the maximum number of cars to pickup or drop off at each point. The program will pick the particular industry or siding. It’s all that simple. The system keeps track of the available client locations and types of cars necessary to satisfy his need.

The last screen to be worked on (by you) is called Trains. We build a train and can click on Move and advance the train to each of the Locations. Hence, by simply clicking on Move the train moves along the route as specified and Built. At each location JMRI schedules your engineer / conductor to do some work. For that purpose it creates a Switch List.
Above is the Trains tableau. Each line represents a particular train. I did not attempt to hold my trains to a schedule at this time; hence, in the future I'll add that feature.

The output of a work schedule for train 301, the second train on the above Tableau is shown below as a Switch List. The engineer / conductor should check the line when done with the task as specified.

The same train, 301 run again produces another completely different Switch List. Note that the following is an entirely different Switch list.
The foregoing represents where we are headed. Thanks for your kind understanding. Why do I always see the same hands with questions?