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Special Issue:
Operation Fundamentals

In This Issue

On the Cover

City operations on the Gateway Central X project railroad (HO, 4'x6'). Complete photo coverage of this layout will appear in the Fall 2004 issue of the *RPO*.

Superintendent's Desk

by Mike Thomas

When was the last time you came to a meeting?

The Gateway Division has almost 120 dues-paying members, but only see thirty or so at a typical monthly meeting. The cast of regulars varies a little bit from the odd months (Trinity Lutheran Church, Clayton Road at Highway 141) to the even months (the VFW hall in O'Fallon, Illinois), but I would guess that in the course of a year we see less than half our members at a regular meeting.

Of course, some folks may have a scheduling conflict with the third Monday of every month, and half-a-dozen of our members live more than an hour's drive from either meeting site, but the vast majority could get there if they wanted to.

So why would you want to? Well, there are three main reasons I turn up every month. First, there's a clinic to take in. I suspect I know less about modeling than most and so I have more to learn, but nobody knows it all. Our monthly clinic is an opportunity to learn something – perhaps about the prototype, or about

some modeling technique, or just to get a guided tour of someone else's layout. Second, there's a business meeting. No, that's not as engrossing as the clinic, but it is how we all find out what's going on. If you were at the August meeting, for example, you'll know that National's Long Range Plan passed and will be implemented in the next year, and that the Regional convention we hosted in June cleared more than a thousand dollars after expenses, and that we've sold out of JB metal wheelsets but are looking into ordering more.

The third and most important reason to haul myself to a meeting is just to see folks. It's only at our meetings that I hear about who's hosting an operating session and who's tearing their layout down and starting over (no, I won't tell you who, you have to come to the meeting). The two hardest things to do at one of our meetings are to get everyone to sit down so we can start, and then to reconvene after the break; people just want to stand around and talk to each other, getting the news from old friends and making new ones. I think that's a sign of our success.

Mike Thomas, 314-664-0680
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Gateway Division Clinicians Wanted

We still need clinics for upcoming meetings. If you know something other people don't then you're qualified to conduct a clinic. And if you don't think you can fill an hour, we can pair you up with another short clinic for the evening. We especially need more hands-on how-to modeling workshops and more in-depth prototype clinics.

Call Mike Thomas at 314-664-0680 or 314-771-0680.

HO Metal Wheelsets

Last year the Division purchased JB metal HO wheelsets for sale to our members. We've now sold out of all 6000 axels of 33" wheels as well as five hundred 36" wheelsets, and have begun looking into purchasing more. Availability and price are not yet known, but we'll announce them as soon as we do. Wheelsets and other Division merchandise are typically available at (or can be ordered at) our monthly meetings.

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The Essence of Ops

by Robert D. (Bob) Johnson
President
Pseudo-Soo Line Model Railroad

After my presentation at the Fall Gateway Convention, a voice from the back of the room asked if I could convert it to an article for the *RPO*. Fortunately, at that very moment my laptop flashed the "blue screen of death" and I could dodge the question. In spite of that, I knew I had been asked and I knew it was something I should do. Besides, it might give me a couple of points for my "Author" merit badge (Certificate of Achievement).

'Tis not as easy task to convert those PowerPoint slides to understandable text. But here goes.

I believe that model railroad operation is one of the world's most magnificent board games. Linn Westcott, long time editor of *Model Railroader*, first expressed that view in an editorial in the 1960s. Operation has all of the elements: a playing board (your layout) with multiple paths to success (trains), tokens (your rolling stock), a card deck to choose from (your waybills), and probability (will we make the meet?). If you are successful, the correct cards get to the right places more or less on time. If you are not successful, you will have chaos and a good bit of frustration on the part of your operators.

I am not going to delve into the complexities of layout design. There are more competent folks to do that. I will give a couple of examples of train orders as I do it on my Pseudo-Soo Line (PSL). However, the key for me is car forwarding, that is, ways to direct the movement of specific cars to specific destinations so the railroad can earn its keep. I will mention several such schemes and detail my own paperwork and that available from the NMRA

Operations Special Interest Group (OpSIG). I will also give a few "if I had to do it over again" suggestions.

Before you can produce train orders, you have to figure out what trains are required to work your industries and server your passengers. You can omit this step if you just have a switching layout, but as soon as you add trains actually going somewhere you need to at least conceptualize a schedule. As the layout and work to be done gets larger, you need a good methodology to make all of the work fit into the time available (normally the length of your operations session). There are numerous software programs that can make this effort relatively painless, but it can be done manually. The end result will be a "string diagram" showing when yards are busy, where trains will meet, etc. Of course, you *will* make some train runs to prove you can switch 12 cars at eight industries in 15 minutes!


```
        ATLANTIC LIMITED WEST
   ATLW                          #7

        STAGING TRACK RIGHT 3

West bound Limited from The Soo to MPLS.
Stops at stations listed for a minimum of 5 min.
Earliest departure indicated for each station.

At RHL, LDY, and WEY drop/pickup
express cars westbound

Dep  The Soo                    1321

Dep  RHL                        1345
Dep  LDY                        1412

Arr  WEY                        1414
   Drop Car for Superior
Dep  WEY                        1514

Arr  MPLS                   abt 1518

        STAGING TRACK RIGHT 3
```

Figure 1

Then you can write your train orders. *Figure 1* shows one of my train orders for a passenger run. *Figure 2* is an order for a freight job, in this case a turn (*e.g.*, out to an industrial area or interchange and back again).

```
              PICKLE PACKER
    PPr                        #53

    MAXIMUM TONNAGE 10 CARS

    Works Cameron industries.

    Originate at Weyerhauser        abt 1105

    Make set outs/ pickups at Fane's Fancy Fruits,
    Gedney Pickles, Kirk's Bakery, Musson's Sand
    & Gravel, and Wisc Electric Power.

    Cars going to any of the industries should be
    switched directly to the industries.

    Returns to WEY with collected cars.

    Terminates WEY                  abt 1243
```

Figure 2

The train order provides the information the operator needs to do his or her job. It gives the train name and number, where it originates, what it does, and when it does it. Finally, it tells where it is supposed to end up at the end of the run. Happily, my layout is a simple oval so trains like the *Atlantic Limited* always end up where they started. It sure makes getting the layout ready for the next session easier!

A freight train order is similar but lists the industries to be worked. Note that it also provides a tonnage limit, 10 cars in this case. This is scale model railroading and if I can suppose my HO track is 4 ft 8½ in, then I can suppose that each car on the layout is equal to five cars on the prototype. Fifty-car locals would be a pretty good size drag for the era and region I model.

My train orders are printed on 3x5 inch cards. I use Avery 5388 index card stock

(three 3x5 cards per sheet) so it is easy to produce a corrected version or replace a mangled one if necessary (operators can be pretty hard on your paperwork). I also use 3x5 inch index cards for my car cards so the package of train order and car cards is easy for the operator to handle.

That, of course, was the easy part! The big questions are:

- How do we decide what cars go where?
- How do we know how to get them to their next destination (the routing)?
- How do we know which cars to pick up?
- How do we make the movements "random?"

How do we keep from going nuts!!!

There have been numerous car-forwarding systems proposed over the years. For convenience I have broken them into five general schemes:

- Car-for-car replacement
- Switch lists
- Color coded tacks
- Single destination waybill cards
- Multiple destination waybill cards

Car-for-Car Replacement

With car-for-car replacement you make up a train in your yard and tootle down the track. At the first industry, you pull cars currently in place and replace them with appropriate cars from your consist. Cars pulled from industries go to the rear of the train; cars being delivered come from the front. Soon you will have used up the original cars and start re-spotting cars you picked up a few industries ago. You don't need many cars initially to switch the entire railroad.

This is a good way to make sure your layout is working reasonably well, make sure run-arounds are long enough, and

so on. If you haven't done much switching work it will give you a chance to practice. However, it doesn't provide the challenge of having to put the "right" car in the "right" place.

Switch Lists

Switch lists are usually computerized and have achieved some popularity. Some folks manually prepare switch lists but it can be very time consuming. Some owners combine the computerized/written list with car cards so there is a piece of paper for each car at each industry. I have used switch lists on other layouts and found them difficult to work with. In addition, after each operating session, you (the owner) have to survey the entire layout to make sure cars ended up where the computer thought they would. If not, you need to make corrections to the database or more the cars before the next list. Overall, computerized lists seem a lot harder both for the owner and the operators. It is up to you, but I don't recommend them, especially as a starting point.

Color-Coded Tacks

The Color-Coded Tack (CCT) system was proposed by Ed Ravenscroft in the July 1965 issue of *Model Railroader*. I have never seen it in use, but it is a good way to explain what we are trying to accomplish.

The method does require a small hole in the top of each car to hold the tack. You need as many tack colors as you have trains to run. Strangely, thumbtacks seem to be a dying breed

(push pins are "in") but can still be found, mostly with plain white or steel finish. You can air brush or hand paint the colors you need. Every piece of rolling stock on the layout except locomotives, cabooses, and cars captive in unit or passenger trains, needs a tack. If your passenger service adds or drops diners, mail cars, or express cars during a session, you will need tacks for these cars. You also need perhaps as may more for resetting the layout after each session. Finally, you need a tack of the appropriate color at each industry/spot. That tack is placed so the engineer can see it when working the industry.

With this system, the yardmaster can easily sort the color-coded cars into trains. However, we also have to indicate the recipient industry. That is done by a single letter on each tack written with an indelible pen. Thus, the yardmaster can sort not only by train, but can block (group cars together) by industry.

The operator then matches the letter code to the actual industry out on the road. Very easy to learn and **no** paperwork! The downside is that little, almost invisible hole in the roof. Of

course, that would normally be hidden by the tack.

The photo shows CCT at the Rhinelander Veneer and Plywood plant on my PSL. Note the industry identifying tack on the table. This could very easily have been mounted on the face of the building and would be very inconspicuous.

Figure 4 is a diagram of a small railroad at the end of an operating session. The rectangles represent cars, each with a color-coded tack as a waybill. The letters on the rectangles represent the color of the tacks, not the industry code. G=Green, O=Orange, R=Red, and Y=Yellow.

It was a miracle! All of the "orange" cars were delivered by the "orange" train to their proper spots at the Mill. The same is true for the "green," "red," and "yellow" cars. Cars left in the yard presumably arrived in the yard after the appropriate train had departed. They might have come from any place on the layout. For example, the "red" car in the yard might have started the session on the AB&C Interchange. During the next session, the "red" car will undoubtedly make it to the staging track via the "red" train.
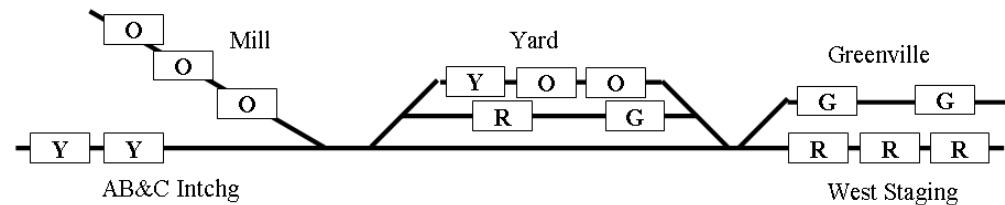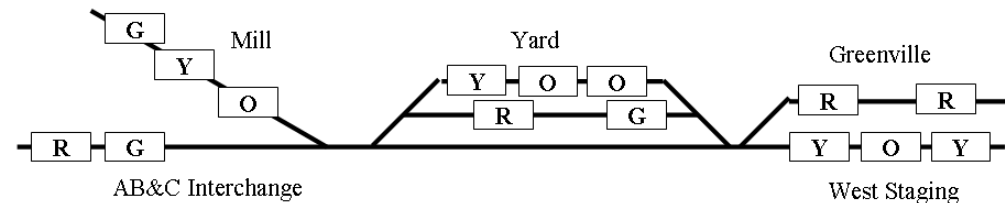
Between sessions you "reset" the layout. That doesn't mean you move all the cars willy-nilly around the layout. Instead, you grab your trusty box of spare color-coded tacks and replace the tacks on those cars that are at, what I call, "*endpoints.*" That is, the cars that have arrived at their correct destinations. The cars in the yard haven't gotten to their destinations, so those tacks remain undisturbed. *Figure 5* shows how the layout now appears.

Notice that one of the "orange" cars at the Mill did not get a new color. This could happen for either of two reasons. First, because you were picking your replacement tacks randomly, there was a chance that you would pick another orange tack. The other possibility is that the Mill, you decided, can only load or unload two cars per day (that's a "scale" 10 cars in my system). Therefore, one of three cars won't get loaded/unloaded and should not leave the Mill until the following session.

Now, let's look at the situation after the first train of the next session has run. We will assume the Mill job, the "orange" train, is first out. *Figure 6* (on the next page) tells the tale.
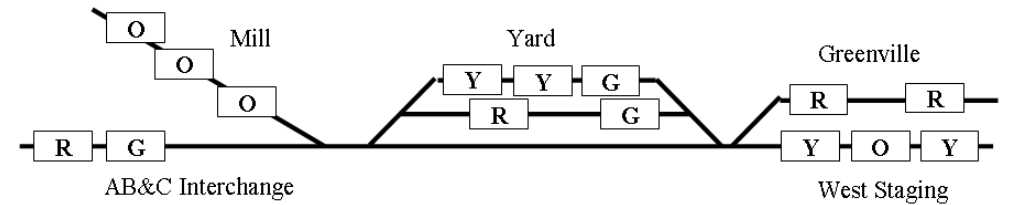

Figure 6

Comparing the two diagrams, you see that the train gathered up the two "orange" cars in the yard and delivered them to the Mill. The "orange" car that had been at the Mill is still there. The "green" and "yellow" cars that were at the Mill have moved to the yard. As you continue through the session, the "yellow," "green," and "red" cars in the yard should all make it to their endpoints. Some of the cars now at the Interchange, Greenville, or Staging will make it to their endpoints, others only to the yard, depending on the schedule of arrivals and departures.

Ed Ravenscroft developed the CCT scheme on his layout in Chicago. He expanded on the method after retiring to the Phoenix area in 1964. Ed passed away in 1998 and his crew continued to use CCT until the layout was dismantled a couple of years later.

Single-Destination Waybill Cards

That brings us to car card and waybill systems. The earliest systems were discussed in the hobby press in the late 1940s. Even Ed Ravenscroft wrote about a method a few years before he created his CCT system. Commercially produced car card and waybill forms have been available for many years. In this discussion I have used my home grown system and the system developed by the Operations Special Interest Group (OpSIG) to demonstrate the critter. There is no perfect system for all layouts, so

these are used only as examples of the methodology and paperwork involved.

First you need a "car card," one for every piece of rolling stock on the railroad with the same exceptions noted for CCT. Figure 7 is a sample of my homegrown car card. I use standard 3x5 inch index cards.

Figure 7

The only mandatory information is the reporting mark, in this case "PSL 2535," and the car type, "Box." I try to keep everything simple so I don't subdivide car types by size, fittings, etc. You could indicate all sorts of special configurations

Figure 4

Figure 5

if you wish, but it will greatly complicate your paperwork.

The only other requirement is a way to attach the waybill. I form pockets from 3x2½ inch pieces of transparency film, the kind used with overhead projectors. The least expensive kind is the "mark on" style (about $15 for 100 sheets at office supply stores). Transparency film made for laser or inkjet printers is much more expensive. Of course, you might be able to salvage a few sheets of film from your sales department t work. A small pack will suffice for a lot of car cards. Use heavy-duty packing tape to attach the acetate – everyday "Scotch" tape will not last long.

You could also use paper clips to attach the waybill. This is quick and easy, but paper clips get caught on other waybills and car cards.

You can add other information. Some operators like to show "When empty return to _____." You can also use the card as your record of when you bought the car, maintenance actions, who gave it to you if it was a gift, and so on. Be sure this information is either on the back or hidden under the waybill so it won't distract your operators.

Your waybills are your most important documents to ensure smooth operations. But, before I go further, let me explain my terminology. The *waybill* consists of the *information* printed on the *physical card*. Later, when I get into multi-destination systems, you will see that you can have multiple waybills on a single, physical card.

Figure 8 is an example of my waybill. At the top left is the "routing code." On the Pseudo-Soo Line this is a two-part code. The first segment indicates what yard the car must go to in order to "catch its train." I need this yard code because I have three major yards that originate trains. If you only have one yard that does all of your classification you do not need the first segment.
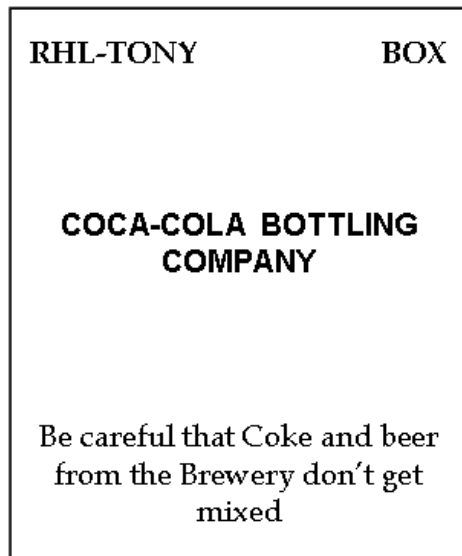

RHL-TONY   BOX

COCA-COLA BOTTLING COMPANY

Be careful that Coke and beer from the Brewery don't get mixed

Figure 8

The second segment indicates the train or "job" that works the receiving industry. This segment is equivalent to the tack color in the CCT system.

The routing code is primarily for the yardmasters. For example, a car appears in the Weyerhauser yard, having been brought in by the Rice Lake Turn. The Yardmaster can see by the routing that is should be forwarded to Rhinelander. He would classify it for the next train to Rhinelander. Similarly, the Rhinelander Yardmaster can see that the car belongs in Rhinelander and it should be classified to the Tony Turn when he prepares that train for the road crew.

In the upper right corner is the car type. This is not necessary if you don't care what types of cars go to what industries. Box cars were appropriate almost everywhere in the "good old days," but I don't want boxcars to go to the pulpwood or coal sidings at the papermill. Thus, you will probably want a way to differentiate waybills for various car types. I make this even easier by using different colors of card stock: green for boxcars, bright yellow for reefers, a dark blue for tank

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cars, manure yellow for stock cars, and so on.

At the center of the waybill in bold letters is the receiving industry. This is the only information the road crew needs. However, the yardmaster also uses it to block the train prior to handling it over to the road crew. This is equivalent to the industry letter code in the CCT system.

Finally, you might occasionally need some additional instructions on the waybill. In the sample provided, I attempted to add some levity because the Brewery and Coca-Cola plant were next to each other on the old Pseudo-Soo Line in Minneapolis.

My waybills are 3 inches tall by 2½ inches wide. This fits comfortably in the pocket of my card cards. Card stock is available at Target, K-Mart, Walmart, and office supply stores. If you need lots of colors, a good source is Xpedx, a printer's supply company. They have two outlets in the St. Louis area. I have a lot of waybills, typically twelve for each industry, so I preprint the information on Avery labels. This is fast and neat. Unfortunately, there isn't a label just the right size, so I trim a little off both ends of the 1 inch by 2-5/8 inch size (Avery 8160 for inkjets). If I had to do it again, I would increase the width of the waybill to 2¾ so the label would fit!

The waybill is completely visible through the acetate window when it is in the pocket of the car card. It is easy to handle, easy to read, and not cluttered with extraneous information.

Most of my *waybills* are on single-destination *cards*. That is, once a car reaches its endpoint, the waybill card has to be replaced by another oe. However, I also use some two-destination cards, depending on the situation and what I am trying to achieve. *Figures 9a and 9b* are an example, showing both sides of a two-sided card.

RHL-PM   HOPPER

RHINELANDER PAPER MILL COAL RECEIVING

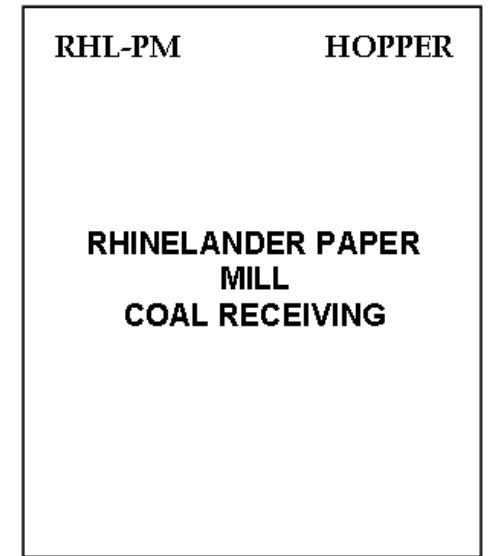*Figure 9a – side 1*

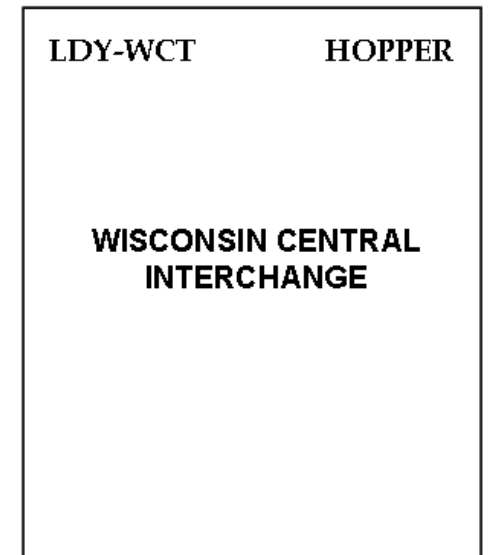LDY-WCT   HOPPER

WISCONSIN CENTRAL INTERCHANGE

Figure 9b – side 2

My loaded hoppers come from the southern Illinois coalfields, well "beyond the basement." The PSL picks them up at its interchanges with the C&NW, Wisconsin Central, and Milwaukee Road. The cycle starts at the interchange. I remove the prior card and insert a new

one. "Side 1" of that card bills the coal to an industry on the PSL, in this case the Rhinelander Papermill. During the next session, or more likely the one after that, the car will arrive at the Papermill. After that session I remove the coal load from the car and flip the waybill card over to display "Side 2." This now bills the empty car back to one of the interchanges, not necessarily the one the car started at. This keeps things fairly random.

However, I could consider this a permanent card and just flip it from Side 2 back to Side 1 and repeat the cycle. For example, I have several brine cars that bring cucumbers from interchanges and deliver them to the Gedney pickle factory at Cameron, Wisconsin. I generally don't replace these cards upon arrival at the interchange.

I have a fairly complicated arrangement with my milk cards on the east and west "milk" trains. There are three cars in the cycle, and each can be billed to three different endpoints, so I keep both a two-destination and a single destination card in the car pocket for each car. Early in the morning the westbound train delivered its milk car to the Lassig Dairy near Hawkins. It picks up the car left at the dairy during the prior session and takes it to Minneapolis. During the session I sneak back to the dairy and flip the waybill card. The car that just arrived is now billed back to The Soo (Sault Ste. Marie). Later the eastbound train drops

its milk car and picks up the car left by the westbound.

To keep operators on their toes, I use a number of special circumstance waybills. The most common one directs that reefers be iced at either Rhinelander or Weyerhauser. These cards are one-half the width of a regular card. They are inserted in the car card pocket in front of the regular waybill so the routing code can still be seen. An assortment of these cards is shown at the bottom of this page.

Multiple-Destination Waybill Cards

Four-destination waybill cards are used by many owners. These have been produced commercially by several companies. *Figures 11a & 11b* (on the next page) show the waybill card sponsored by the Operations Special Interest Group (OpSIG). These cards are about 2½ inches wide by 3¾ inches tall. Contact the OpSIG at TrainFan@aol.com for availability and cost.

You cycle through the waybills by first turning the card end-for-end, then turning it over, then end-for-end again. At the end of the cycle you can replace it or just turn in back to Waybill 1.

This form has blanks for a lot of data. At the upper left corner of Waybill 1 is a box for the car type. This is meant to be a two-digit code along the lines of the AAR code system. It is equivalent to the car type on my waybills and is for filing and

HOT BOX!!! Set out at closest industry siding	EXCESS WEIGHT LOAD Must be at head of train	ICE AT RHINE-LANDER 20 minutes	HAZARD CARGO At least one car between this car and loco/ caboose	BROKEN DRAW-BAR Return to RHL RIP track

Figure 11a – side 1 of the card

Figure 11b – side 2 of the card

Making sure that you have a waybill appropriate for the car.

The "Routing" line is used in the same manner as my routing. "To" directs the car to a town or major industry; "Rcvr" provides the specific industry, siding, or "spot." The "From" and "Shpr" lines provide similar information regarding where the car originated. Finally, "Contents" allows you to specify what the car is carrying or that it is empty. All this is typical of what a prototype waybill would contain. Some owners are very particular about this information being logical and consistent.

However, your engineer/conductor doesn't care where the car came from or what is in it (that's also prototypical!). The amount of information results in a crowded, difficult to read waybill that can

easily confuse an operator. *Figure 12* is a suggested simplified version of the OpSIG waybill card. You can create these on your computer (I used Microsoft Publisher 97). You will need a similar "side 2" version with waybills 3 and 4 indicated. Even easier, create the basic form (with the waybill numbers) and print the routing, type, and "To" information on Avery labels. Note that I have put the waybill number at the bottom because the operator doesn't care about it. I discuss the serial number (S/N) toward the end of this article.

Obviously, you could use these cards (OpSIG or a simplified version) as single-, two-, or three-destination cards if the particular situation makes it appropriate. If your hoppers cycled back and forth between the same industry (say, a power

Figure 12

plant) and the coal source, two-destinations might be appropriate.

With the OpSIG format you need a car card that hides all but the current waybill. *Figure 13* shows the OpSIG car card with a waybill card in place. The waybill pocket is formed by folding the bottom of the pre-printed card upward and sealing the sides with packing tape. That hides the bottom of the waybill card so the operator only sees the current waybill. The assembled card is about 3x5 inch size.

In the "Car Type" box use the same letter codes you use on the waybills so you can match the car type with the waybill type. "Road" and "No." are the reporting marks. "Color" is provided because in the smaller scales the reporting marks might me difficult for some operators to read. Actually, I sometimes indicate the color or some other distinguishing characteristic

on my car cards so the extra information can be useful even in HO scale.

On the car card, hidden under the waybill, is a pre-printed note: "Empty Car, Return To:." After you have cycled through the waybills, if you remove the waybill card you reveal this note. This is actually a fifth waybill. I tried this technique many years ago on the PSL but it gave problems. Typically, one-quarter or more of your cars will be "empty." That means you need a place to receive them – large yards with dead storage tracks and/or lots of interchange tracks. If yours is a bridge line, you will jam up your staging tracks. If you have designed your layout with these considerations in mind, you should not have a problem but at least I have warned you!

Figure 13

Another issue is that this "fifth waybill" looks different than your regular waybills. That adds a confusion factor for the casual operator. I think making one of the positions on your regular waybill card the "empty" destination is much better. As I said earlier, anything that adds confusion should be avoided.

That takes care of the mechanics. Now we get to the really hard stuff (well, sort of).

Balancing the Railroad

To operate smoothly you need the right number of waybills for each destination. A siding with three "spots" needs thrice as many waybills as a siding with a single spot. When figuring the number of waybills required, recognize that interchanges and staging tracks are just big general-purpose industries. Every "spot" on these tracks has to have an appropriate number of waybills to keep the traffic flowing.

If you have the correct number of waybills for each spot and for each car type, your railroad will be "balanced." That is, cars will flow smoothly without jamming a bunch of tank cars into a siding that should mostly get boxcars. That is not to say that your sidings will never be chock-a-block with cars, but over several sessions it will average out. At the end of each session some sidings/spots will be empty while others are plugged. That is the natural ebb and flow that makes it interesting.

That is, of course, if you avoid the temptation of having too many cars on the layout. Yards and sidings will be jammed if you keep adding cars. Trains will be long, meets difficult, and run-around tracks and industry sidings too short. A job that should take ten minutes will take 15 or 20. Remember that not only must the total number of cars be correct, but you must also have the right proportions based on your industry needs.

To get there, start with a spreadsheet (manual or computerized) of your industries and car types. *Figure 14* is a section of my spreadsheet. This segment only covers industries at Ladysmith and I have omitted several car types for clarity.

As a reminder, you have to start with an idea of what trains are required to service your customers. The industries shown here, I decided, should all be worked by the Ladysmith Yardmaster, so this list represents the industries worked by one of my "turns." The spreadsheet has similar lists for Rhinelander and Weyer-hauser. There are also lists of industries worked by each of several "turns" and "peddlers" (you may use different terms). Overall, I have 60 industries and team tracks that have to be accounted for.

The column labeled "Cap" indicates the *capacity* of the industry to *load/unload* cars each day. It does not indicate the number of cars that will fit on the track. Most of my customers have capacity for

Ladysmith Industry	Cap	Reef	Box	Hop	Ggon	Pgon	Stk	Flt	Tnk	Tot
Attabury Furniture	2		9	1	1			1		12
Team Track	2		12							12
McDonald's Lumber	2		9	1	1			1		12
Frazier's Plumbing	2		12							12
Flatley Oil	2								12	12
Shellbrach Junk Yard	1				6					6
Fredericks Foundry	2		5	3	2			1		11

Figure 14

two cars although, as you can see, Shellbrach Junk Yard can only handle one car per day. My layout represents a fairly low-density line in northern Wisconsin in 1953, so this feels reasonable. Also, I decided I would rather have more but smaller industries in the space available. Repeating an earlier statement, my "car scale" is one HO car equals five of the real thing, so a capacity of two reflects a pretty substantial industry.

The columns labeled "Reef," "Box," etc. represent my car types. If you have opted to subdivide basic types into various subtypes (*e.g.*, iced reefers vs. mechanical reefers), you need a column for each subtype.

You have to decide how many waybills you need for each "spot." An industry with a capacity of two cars per day constitutes two spots. You could get by with just two waybills per spot, but it will severely restrict the flexibility and randomness that makes it interesting. For reasons lost in antiquity, I decided on six waybills per spot many years ago. When I moved to St. Peters in 2000, I stayed with that decision – but four or five per spot would have worked as well. I suggest that you start with four – you can always increase it later if you feel it would be useful.

Having settled on six per spot (as shown in the spreadsheet), you see that I need 12 waybills for most industries. The column on the far right, "Tot," reflects that requirement. This is actually a sum of the car-type columns to show that I have generated enough waybills. At issue then is how to distribute the waybills between different car types. At Attabury Furniture, I decided that 9 out of 12 waybills should be for boxcars. The other three waybills are for a coal hopper, a general service gondola, and a flat car. This seems to be a fairly reasonable distribution for a furniture manufacturer in the mid-1950s. McDonald's Lumber gets the same

distribution, while Frazier's Plumbing and the team track only receive boxcars. Flatley Oil gets only tank cars, although it would be perfectly reasonable to have two or three boxcar waybills in the distribution. Fredericks Foundry is a new industry, and for some reason I did not make as many waybills as I should have. As a result, the foundry will receive a few less cars than its "fair share."

Again, the purpose of all of this is to balance the railroad. If you had 10 waybills per spot for the team track vs. six for all other spots at Ladysmith, on average you would pull 67% more waybills for the team track than for the other industries. This system would diligently route an excessive number of cars to the team track. No fun for you or your operators!

The capacity of the industry also affects the way I reset after an operating session. As mentioned when I discussed the color-coded tack method, if there are more cars at the industry than its daily load/unload capacity, those excess cars should stay at the industry. Thus, if the capacity is two, two of the cars would get new waybills while any others would remain billed to the industry. The operator will see when he works the industry that two cars should come our and the rest remain. If you have balanced your supply of waybills and don't have too many cars on the layout, over the next one or two sessions those extra cars will have "served their time" and the industry will no longer be overloaded.

It is also possible when you randomly pick a waybill while resetting the layout that it will be for the same industry. No problem. Just pull the old waybill card and insert the new one in the car card pocket. This tells the operator that the car should remain in place for another day. This applies even if the industry is at or below capacity. This doesn't happen often with my 60 industries, but will be

Interchanges	Cap	Reef	Box	Hop	Ggon	Pgon	Stk	Flt	Tnk	Pkl	Chop	W'm	Tot
Wisc Central	8		7	27	3	6	2	1	2		1		49
C&NW (RHL)	8	4	6	19	2	7	2	3	5		2		50
C&NW (RiceLake)	7	6	9	11	1	5	2	1		6	1	1	43
Milwaukee Road	4	8	7	3	1	2	2				1		24

Figure 15

more common if your have fewer customers. The idea is to have fun while providing some challenge to your operators, so don't worry about re-billing a car to an industry.

Figure 15 is the segment of my spreadsheet listing the interchange tracks. In this case, the "Cap" column indications the "ideal" number of cars delivered to the interchange each session, rather than the fixed capacity of industries. The difference is that when I reset the interchanges, all cars get new waybills, even if there are more than the ideal number at the interchange. This is obviously what would happen in real life – the receiving railroad would take all cars you delivered and they would have given you everything they had.

The matrix shows that there are still six waybills per "spot," requiring a lot of waybills for the larger interchanges. You can also see the large number of coal hoppers going to the interchanges. Beyond that, it shows the mish-mash of car types that you would expect to see at a general-purpose interchange.

Finally, *Figure 16* shows the portion of the spreadsheet devoted to my staging tracks. I actually have eight staging tracks, but only three are for freights.

Staging track capacity and resetting are handled the same way interchanges are.

You can see by this matrix that I consider a lot of my reefers to be in bridge traffic – moving from the west coast eastward across the northern tier to New York and Boston markets. Conversely, the paucity of gons, stock cars, etc. indicates that most of that traffic is within the PSL or with its interchange railroads. There are no waybills for coal hoppers or pulpwood gons because that traffic is exclusively between the PSL and the interchanges.

So far my discussion of the mathematics of waybills has been on the basis that you opt primarily for single-destination waybill cards. After every session, you replace all cards for cars that have reached endpoints – industry, interchange, or staging – with the exceptions noted. But how will balance be achieved if you opt for an OpSIG type card with up to four destinations per card?

First, if all of your waybill cards utilize all four destinations, it means that you have four waybills *per car* rather than four *per spot*. You will probably have more cars on the layout than spots. Recently I counted 195 cars (not counting unit trains, such as my ore train and passenger trains) on my layout, compared to about 160 car spots, a ratio of 1.22 cars per spot. Using 4-destination cards leads to a waybill-to-spot ratio of almost 5 – more than adequate for car

Manifests	Cap	Reef	Box	Hop	Ggon	Pgon	Stk	Flt	Tnk	Pkl	W'm	Tot
Soo Express	10	25	27		2		2	2	2			60
Minneapolis Exp	10	25	27		2		2	2	2			60
Superior North	7	12	24		3				3			42

Figure 16

distribution flexibility and randomness.

So it is reasonable to have one waybill per car and never have to exchange the card. This is neat because it is much easier to turn cards that to replace them. However, with multiple waybills per card, it becomes much more difficult to keep track of what you have done. I came up with the following spreadsheet format for Noel Baker when he started writing his waybills.

In this matrix I have put the industries and capacities across the top and the car types in the left column. I have given each card a serial number (S/N) for

need waybills (the train order suffices) unless the cars are to be spotted at different tipples at the mine. Only if you have some sort of three-step sequence, similar to my milk car situation, would you not use all four positions. When you are done, the grand total for each industry should add up to something near your expected ratio of waybills-to-spots. If you add more cars, your waybill-to-spots ratio will increase, but that is not a bad thing. If the railroad starts bogging down because you have too many cars, you remove some of them along with their car cards and waybills.

		Industries								
		Steins	Fanes	Daily News	PM Recvg	Badger Box	GB Packers	Pauls Poultry	WC Intchg	etc.
Cap →		2	2	2	2	2	2	2	8	
↓ Car Type	↓S/N									
Box	B001	1		1	1				1	
	B002			1		1			1	1
	B003	1			1				1	1
Total Boxcar		2		2	2	1			3	2
Reefer	R001		1				1		1	1
	R002		1				1		1	1
	R003						1		1	2
Total Reefer			2				3		3	4
	etc.									
Grand Total		X	Y	Z	etc.					

tracking purposes (remember this on my simplified version of the OpSIG card on page 13?). You will have as many waybill cards as you have cars on the layout. Note that each card has a maximum of four destinations indicated. If a car goes back and forth between a coal mine and power plant, then just repeat the sequence twice on one card. Count it twice on the spreadsheet. Note that if this hopper is assigned to a unit train from mine to power plant and back, you don't

If I started over, I would probably use a simplified form of the OpSIG waybill card. With a computer, it is much easier to create the cards and keep track of waybill counts than when I started. As I said before, flipping cards between sessions is much easier than exchanging them. I would still use colored card stock to make the cards, but that is a minor consideration. Of course, my car cards with their transparent pockets would not work. I would certainly use something like

the OpSIG car card. That would be another real advantage because my car cards are very time consuming to make. The OpSIG form is much easier.

If you are interested in operations you should visit a couple of operating layouts and see how it is done. You should also join the NMRA Operations Special Interest Group. They have an excellent quarterly journal; the dues are $15 per year.

Operations SIG
Box 872
Arlington Heights, IL 60006-0872

The Pseudo-Soo Line welcomes visitors to its monthly operating sessions. I will put you to work and you can help us achieve our goal of unparalleled service. Remember our motto: "*We give prompt service no matter how long it takes.*"

Car Card Resources

by Richard Schumacher

There are a number of sources for the four-way waybill and car card system Bob discussed in his article, as well as resources and additional information on how to setup your operations.

For over twenty years, **Old Line Graphics** (www.oldlinegraphics.com) has offered printed sets of the forms needed for this operating system. They offer a "basic set" for $22.50 (including shipping) which includes 100 car cards, 150 waybills, 50 special waybills, 50 messages, 50 train orders, 50 unit train bills, 50 mine block bills, and 50 bad order slips. They also sell each item "a la carte" in pads of 50 forms.

Old Line Graphics
1604 Woodwell Road
Silver Spring, MD 20906-2048

The **NMRA OpSIG** is a wonderful source of operations information; membership is well worth the investment of $15/year.

Their "Introduction to Waybills and Car Cards" article is online at:
http://www.opsig.org/primer/guide/

Along with a primer on car cards:
http://www.opsig.org/primer/carcards.shtml

And the OpSIG Membership form:
http://www.opsig.org/OpSIGappform.pdf

The **Australasian Region OpSIG** also has waybills and car cards you can download and print from their website:
http://www.nmra.org.au/OPSIG/waybills.html

The **Gateway Division NMRA** has an operations overview article online at:
http://www.gatewaynmra.org/designops.htm

and an operator's/owner's guide:
http://www.gatewaynmra.org/opguide.htm

Micro-Mark (www.micromark.com) recently introduced their "Car Routing System Starter Pack" (item #82916) which includes 100 each car cards, waybills, and bad order slips along with 25 locomotive cards and 4 three-compartment bill boxes for $32.70.

This product is especially interesting because of the nice wooden bill boxes included with the starter pack – also available separately (package of 2, item #82914, $9.95). Prices do not include shipping.

A problem with any car card/ and waybill system is where the bills are placed once the cars are spotted. Some modelers use a banker's clip to hold the cards together and hang it near the siding. Others build small boxes or trays attached to the layout fascia, although they can be complex / troublesome to build. Micro-Mark's bill boxes look nice, are purpose-made for the task, pre-assembled, and ready to attach to your layout.

Micro-Mark
340 Snyder Avenue
Berkeley Heights, NJ 07922-1595
1-800-225-1066

Division Minutes

Recorded by Dave Bartz, Clerk

Gateway Division Meeting Minutes for Dec. 15, 2003

The meeting began at 7:05 PM when Assistant Superintendent Mike Thomas introduced Chris Theis, the clinician, for his presentation on a new modular design concept. The new design is for modules with free geometry standards except for the connection points, and is called "Free-mo." The Free-mo modules are to enable the owners to operate trains rather than for spectators to watch trains which are just being "run." The local group, which is beginning to investigate and develop these new modules, is the Gateway Society of Model Railroad Engineers. Anyone interested in obtaining additional information can contact Chris Theis or the web site: free - monthly.com.

We thank Chris for his informative clinic and for sharing this new concept with our members.

There was no business meeting held in November due to the Christmas party that was held at Trinity Lutheran Church for all our members. All those who attended enjoyed the party. A special thanks to Ron Gawedzinski for his entertaining video of his vacation trip to Alaska.

Assistant Superintendent Mike Thomas called the business meeting to order at 8:15 PM.

Visitors: no visitors were present.

Minutes: Don Taschner moved to accept the minutes and Bob Boedges gave the second. The minutes were corrected to change the spelling of "Structures". The minutes were then Approved.

Treasurer's Report: Craig Brown moved to accept the Treasurer's report and Jim Anderson gave the second. As of December 14, 2003 the treasury has an ending balance of $23,951.50. Approved.

Ken Thompson also included a report of our finances from January 1, 2003, through December 14, 2003. We began the year with a balance of $39,902.63 and have an ending balance of $23,951.50.

Old Business:

AP Awards: no report

Gateway XI Project Layout: Brad Joseph reported that the new "N" scale project layout is completed with the exception of a few trees and minor scenic details. The layout was running at the "Fall Meet." Volunteers are needed to help sell raffle tickets and answer questions from visitors at the GATS show in January.

Wheel Sets: Anyone wishing to purchase wheel sets in either wheel size, please contact John Hardy.

Fall Meet: The Fall meet was very successful, especially as compared to the last few events. We had 180 attendees and made a profit of approximately $500.00. The reason for the success was the effort of many of our members who donated considerable time and energies to the meet.

Thanks to all who helped make the meet fun for everyone.

2004 MCoR Convention: Jim Anderson reported for John Schindler, that the fall meet is progressing on schedule. Registration forms are available on the Gateway web site and in the new Caboose Kibitzer. Please send by U.S. mail completed registration forms to Jim Anderson, who is the convention registrar. There is going to be a maximum number of attendees allowed of 200-225, so please register early.

Membership: Ken Thompson reported that we have 125 dues paying members as of December 15, 2003.

Board of Trustees Report: Jim Anderson is a newly elected trustee and will attend his first BOT meeting in February. He will make a report to the membership after that meeting. Jim did report that the existing BOT did approve the LRP and are now investigating ways to get the general membership to participate in voting on approval. They are concerned that only a small percentage of the membership will actually vote, when all members should exercise that privilege. Voting will probably take place this coming summer.

Data Projector: Mike Thomas reported that a new Dell 2200 MP data projector was purchased for the Gateway Division. The cost of the projector was $899.00. This is considerably less than the amount of $1500.00 that was allocated for the purchase. A projection screen still needs to be obtained.

New Business:

Model Railroad Publicity: Mary Birdsell reported that the Alton newspaper interviewed various model railroaders including her husband Bill for a prominent article in their paper. A local radio station also interviewed modeler's for "on air" information to the public. This was a great opportunity to interest additional possible members into model railroading.

VFW Hall: Ken Thompson moved that we donate $100.00 to the VFW Hall for the use of their facilities for 2003, as agreed to by the hall. Brad Joseph gave the second. Approved.

HO Car Kits: HO Roundhouse car kits were given to all members in attendance at the meeting tonight. The kits were leftover from donations to the Missouri Historical Museum project.

50:50: $28.00 was collected and Skip MacEwen won $14.00.

Adjournment: Jim Anderson moved to adjourn the meeting at 8:45 PM and Ron Gawedzinski gave the second. Approved.

Attendance: There were 23 members in attendance.

Division Minutes

Recorded by Bob Boedges, Clerk

Gateway Division Meeting Minutes for Jan. 19, 2004

The meeting was called to order by Superintendent Mike Thomas at 7:00 PM. Superintendent Thomas introduced Larry Sayre who presented a clinic on "Background Sound." Larry discussed his system of using simple portable type cassette players placed in strategic locations around the layout to provide sounds unique to a specific location, *i.e.* diesel sounds emanating from the diesel repair shop, etc. He prepared a handout with a description of his project and wiring diagrams for the speakers. We thank Larry for his presentation to our membership.

Business Meeting

The business meeting was called to order by Superintendent Thomas at 7:30 PM.

Visitors: Three visitors were in attendance: David Silverman, Dale Talbot, and Bruce Katts.

Introduction of the New Officers:

Superintendent Thomas introduced the new officers for 2004: Superintendent - Mike Thomas, Paymaster - Dave Lyons, and Clerk - Bob Boedges. Thomas also mentioned that the position of Assistant Superintendent remains unfilled due to the illness of Richard Laux who is unable to fulfill the duties of the office. Anyone interested in taking over this position should contact one of the officers.

Special Thanks to the Outgoing Officers:

Superintendent Thomas thanked the outgoing Superintendent Bob Amsler, Treasurer Ken Thompson, and Clerk Dave Bartz for their work and contribution to the Division. The membership recognized their efforts with a round of applause.

Minutes: The minutes of the December Meeting were presented. Ken Thompson corrected the "VFW Hall" entry to read as follows: "Ken Thompson moved that we donate $100.00 to the VFW Hall for the use of their facilities for 2003, as agreed to by the hall. Brad Joseph gave the second."

A motion to approve the minutes as corrected was made by Bob Amsler, and seconded by Randy Meyer. The corrected minutes were Approved by a voice vote of the membership.

Treasurer's Report: A printed copy of the one month treasures report (December 15, 2003 to January 15, 2004) was distributed. The report indicated an ending balance of $23,147.52. There were no corrections, additions, or questions. Brian Post moved for acceptance of the report with a second from Bob Amsler. The report was Approved by a voice vote of the membership.

Old Business:

AP Awards: Don Taschner indicated he had two awards for "structures" for John Carty.

These awards were for a National Stockyards Water Tower and a National City Ice House entered into the contest at the regional meet in November. The entries were judged by Brad Joseph and sent in by Don. John was not in attendance, and the awards will be made at the next meeting in O'Fallon.

Membership Contest: Hank Kraichely reported that he did not have the final figures for the contest from Chattanooga and did not know if or how the Gateway Division might be recognized. He also indicated that he should know in the near future.

Wheel Sets: John Hardy reported that we still have 1,900 wheel sets remaining to be sold. We have sold 4,100 sets of the original purchases of 6,000. John pointed out that these are metal, insulated wheels that provide increased weight for your rolling stock, and a more prototypical sound as they cross rail joints. His initial reported cost of $.50 per 100 created a flurry of buy offers from the membership, however, that was corrected to $.50 per axel in multiples of 100 by Superintendent Thomas. The correction cooled the buying frenzy. Thomas did point out that we still had a large amount of money tied up in inventory, and that the members needed to buy wheel sets!!!!

Name Tags: Jack Templeton again reported that he would be happy to make NMRA name tags for anyone interested in having one. Members should give their name to Jack, and $1.00 to Dave Lyon. Jack will make the tags, and bill the association for the cost.

Gary Hoover Cars: Ken Thompson reported that we still have over 100 "Gary Hoover" cars left. He also indicated that he had track gauges in N, HO, HOn3, S, Sn3, O, and On3 available at the meeting. Superintendent Thomas again pointed out that we had money tied up in these inventory items, and that we needed to sell them as soon as possible.

Boley Vehicles: Hank Kraichely reported that the vendor selling the vehicles never returned his calls, and that the purchase of these items at a reduced cost probably would not be available to the membership.

NMRA Polo Shirts: Paul Metzler was not in attendance. There does not seem to be much interest in continuing the project, and at this point the project will not be continued.

RPO: Richard Schumacher was not in attendance. The Winter issue should be out soon, and the deadline for submitting materials for the Spring issue is March 9th.

Kalmbach Link: Mike Thomas reported that Kalmbach Publishing is offering a 30% finders fee for any subscriptions that would result from a link on the Gateway web site. John Hardy suggested a resolution of approval from the membership to approve the link. The resolution was accepted by the membership.

Regional Convention Report: John Schlinder reported that the Convention would be held from June 3rd through the 6th at the Gateway Convention Center in Collinsville, IL. Special room rates are available in several of the hotels near the Center. Registration forms are available, and we are looking for a total registration of at least 200. For the $25.00 registration the participants will receive; a modeling contest, home railroad tours with a least two railroads not previously seen, prototype tours, free entrance to the swap meet, clinics presented by modelers from outside the St. Louis area including Jim Providenza and Bill Kaufman from California, and a silent auction. A Saturday night banquet will also be available for an extra charge. Forms for the modeling contest are available on the web site if you choose to enter one of your projects. Non-members will be able to attend the Convention for a $30.00 registration fee but will not be eligible to participate in the contest. Only 10 registrations had been received by the start of the meeting.

New Business:

Gateway Central Layout: The layout will be going from Don Ayres house to the St. Charles Show on Saturday the 24th, the Wentzville GATS show on Jan. 31st and Feb. 1st, and the Collinsville GATS show in March. Sign up sheets are available for Volunteers to sell chances and to transport the layout to the various shows. We have four free admissions to the St. Charles show, and six free admissions to the Wentzville show. This is one of our major fund raisers for the year, and a chance to provide simple clinics on layout construction. Members were encouraged to sign up.

Athearn Sale: There was a brief discussion of the sale of Athearn, Inc. to Horizon Hobby from Champaign, IL.

Long Range Plan: Implementation of the plan will come up for a vote this spring. This is a long and involved and not of interest to everyone. Jim Anderson is the point of contact and will be available to discuss the issues at the end of the regular meeting. The full plan will be included in the February issue of *Scale Rails* and will include a ballot. John Hardy strongly suggested that everyone read the plan, and be sure to vote.

Awards: The Mid-Continent region gives two awards each year. Nominations are now being accepted. The Kenny Kline Award is given for long standing service to NMRA and the hobby. The Larry Long Award is given to the volunteer of the year at either the region or division level. Jim Anderson is accepting nominations and suggestions.

Volunteer Opportunities: The association needs an Assistant Superintendent to coordinate clinics and assume the other duties of that office. We also need someone to coordinate the inventory of association owned materials. A coordinator of the November regional meet is needed and someone to coordinate the refreshments for the MO meetings.

Annual Audit: Venita Lake suggested the need for an annual audit of the association financial records. Mike Thomas indicated that this has never been done, and is not needed.

Ballot Disposal: Bob Amsler moved that he be allowed to destroy the ballots from this year's election of officers. The motion was seconded by John Hardy and was approved by voice vote of the membership.

Thomas Watkins Inquiry: Venita Lake reported the receipt of an email from Thomas Watkins concerning help with construction of layout for commercial purposes based on an intermodal theme.

50/50 Drawing: The 50/50 drawing was won by Superintendent Mike Thomas.

Adjournment: A motion to adjourn was made by Randy Meyers, and seconded by John Hardy. The motion was approved by voice vote of the membership at 8:45 PM.

Attendance: There were 35 members in attendance.

Division Minutes

Recorded by Bob Boedges, Clerk

Gateway Division Meeting Minutes for Feb. 16, 2004

The meeting was called to order by Superintendent Mike Thomas at 6:55 PM. Superintendent Thomas introduced John Schindler who presented a clinic on the progress and operation of his *Otter Tail Valley* layout. John outlined his work on room preparation, including utilities and support posts. He then discussed prototype information on the Ottertail Valley system which became part of Rail America. He completed his presentation with a description of his layout specifications, and operating system including the concept of "direct train control" by the dispatcher. We thank John for his presentation to our membership.

Business Meeting

The business meeting was called to order by Superintendent Thomas at 7:41 PM.

Visitors: No visitors were in attendance. John Winter was introduced as a returning member.

Minutes: The minutes of the January Meeting were distributed. Bob Boedges corrected the paragraph entitled "Regional Convention Report." The Banquet night is Saturday, not Friday as indicated in the minutes.

A motion to approve the minutes as corrected was made by Dick Wegner, and seconded by Richard Lake. The corrected minutes were Approved by a voice vote of the membership except for Randy Meyer who voted "nay."

Treasurer's Report: A printed copy of the one month treasures report (January 16 to February 15, 2004) was distributed by Dave Lyon. The report indicated an ending balance of $24,966.49. There were no corrections, additions, or questions. Richard Lake moved for acceptance of the report with a second from Hank Kraichely. The report was Approved by a voice vote of the membership before Randy Meyer had a chance to vote.

Old Business:

AP Awards: Don Taschner indicated he still had two awards for "structures" for John Carty.

These awards were for a National Stockyards Water Tower and a National City Ice House entered into the contest at the regional meet in November. These awards have not yet been presented to John.

Membership Contest: Hank Kraichely reported that the final count is not complete, and that the process has been more complicated than anticipated.

Wheel Sets: Ken Thompson reported that he had 400 sets with him at the meeting to sell and at least 1,000 left in inventory. Superintendent Thomas pointed out that there was a $250.00 item in the Treasures Report labeled "Wheel Set Sales" indicating they continue to sell.

Name Tags: Superintendent Thomas reported that Jack Templeton would be happy to make NMRA name tags for anyone interested in having one. Some new tags were delivered at the meeting. Members should give their name to Jack, and $1.00 to Dave Lyon. Jack will make the tags, and bill the association for the cost.

Gary Hoover Cars: Ken Thompson reported that we still have 145 "Gary Hoover" cars left in inventory.

RPO: Superintendent Thomas reported that there was nothing new to report with regard to the *RPO*. The deadline for submitting articles for the Spring issue is March 9, 2004. Any members with materials to contribute should get them to Richard Schumacher by the deadline date.

Regional Convention Report: John Schindler encouraged the 32 members in attendance to register for the Convention. He pointed out that activities covered by the $25.00 registration fee included home railroad tours, as well as a modeling contest featuring a "popular vote" category in addition to NMRA judging. There will also be a switching contest using the Gateway Central Layout, a silent auction, and 21 clinicians. Admittance to the Train Show will also be included in the registration fee, and the show will feature the Gateway Garden Club layout in the lobby, as well as the Quincy Club layout in the show area. As an extra incentive to Gateway Division members, a special contest has been initiated. In order to be eligible for the contest you must be a Division member, and you must attend the regional. Out of that pool of people a name will be drawn and the winner will receive a three day "test drive" in a Chrysler Crossfire Convertible, or a PT Cruiser, depending on your own desire. Members were encouraged to bring guests, even if they are not members. Jim Anderson indicated that we have 33 people enrolled to date and that we need 200 to make the event a financial success. The rental of the Gateway Convention Center is the largest expense item. The Kansas City Convention only drew 165 and there is a concern that we will not

make our minimum. John also described the portion of the facility that will be devoted to the Gateway event and he also indicated that we would be sharing the facility with some sort of "Star Wars" event. Venita Lake made a plea for members to distribute flyers for the train show portion of the event to local area hobby shops. She also indicated a need for a member from Illinois to help her with publicity in the Illinois area.

Superintendent Thomas requested the help of local members transporting out of town visitors to the various home layout tour locations.

New Business:

Gateway Central Layout: Superintendent Thomas reported that Brad Joseph was not in attendance to give the report but the layout was displayed at the St. Charles Show on Saturday January 24th, and the Wentzville GATS show on Jan. 31st and Feb. 1st. The next showing will be at the Collinsville GATS show on March 20th and 21st. Sign up sheets are available for volunteers to sell chances and to transport the layout to the Collinsville Show, and Hank Kraichely was the only member signed up to work to date. There is an early shift on Saturday for set up and regular morning and afternoon shifts on both Saturday and Sunday. We need three to four people for each shift. The sign up sheet was passed among the members in attendance.

Volunteer Opportunities: The association needs an Assistant Superintendent to coordinate clinics and assume the other duties of that office. We also need someone to coordinate the inventory of association owned materials. Hank Kraichely has agreed to act as coordinator of the November regional meet and he needs help setting up chairs, tables, as well as six or more clinicians. Talk to Hank if you are willing to help out.

Turkey Creek Division Meet: Mike Thomas announced the Turkey Creek Division Meet will be held on Saturday August 21st in the Lennox Kansas Community Center. He has more information for anyone interested.

Future Clinic Presentations: Superintendent Thomas announced the following clinic sessions for future Gateway meetings:

March 15 – Bill Levin, Backdrop painting for the color blind

April 19 – Paul Metzler, Scenery Clinic

May 17 – Richard Schumacher, Model Photography

June 21 – Grab Bag of members, Modeling Tools

July19 – Jerry Smith, Open House at Augusta Station (no business meeting)

August 16 – Dave Roeder, Background Painting

September 20 – Hank Kraichely, New Thinking for a New Layout

After September more clinics needed. Sign up to share your techniques, etc.

Monthly Home Layout Open House: Bob Boedges suggested consideration of a "round robin" monthly open house at each member's layout, so that members would have the opportunity to share their work with one another. This was offered as an item for consideration. No motion was made or intended.

50/50 Drawing: The winning ticket for $21.00 was held by Bob Freis.

Long Range Plan: Jim Anderson strongly suggested that members read the Long Range Plan in Scale Rails and be sure to vote. The dues structure was discussed, and the final consensus was that much of the plan had not been thought through very well.

Adjournment: A motion to adjourn was made by Jim Ables and seconded by Randy Meyer. The motion was approved by voice vote of the membership at 8:27 PM.

Attendance: There were 32 members in attendance.

Coming Events

by Venita Lake

Do you know of an event of interest to other Gateway Division members? Send the information to the editor so it can be listed in future *RPOs* and on the **www.gatewaynmra.org** website.

NMRA Divisions or St. Louis area clubs may have their event listed here by sending a description of the event (event name, date(s), time, location, location address, admission cost, contact name and phone, website and/or contact email address) to the Editor (rpo@gatewaynmra.org).

Vintage Color Signs

By Don Consolver

I have a tip for other modelers that you may want to pass along. When I needed window signs for my corner drugstore and movie theater, I searched the internet for metal reproduction signs and movie posters. There are a number of sites that deal in nostalgic signs and old movie posters. These sites generally feature good, clean photos of their goods. Although the images are small on the web, when downloaded and reduced to N or HO scale, they look great!

It usually helps to print them out using a high-quality color laser printer. For most people, that may mean taking a diskette or CD to the local quick copy place, such as a Kinkos, to get the best reproduction. I recommend placing as many images on the sheet as possible, allowing space to trim them out. An 8½x11 sheet will give you dozens of signs, billboards and movie posters. As for paper stock, coated paper (like magazine stock) will keep the image sharper, but may not run through some copiers. Work with the copy center staff and they may be able to help on that.

To print on actual window glazing, I recommend Highland 904 overhead

transparency film for laser printers. This film has a piece of paper attached to the edge that keeps the transparency from fogging as it goes through the machine. Regular transparency film will work, but usually the plastic fogs from the heat. Printing directly on the windows works well for things that are "painted" on the glass, such as a tavern name, but for posters hung in the window, the signs usually look too transparent to be effective. I tried painting the back of the transparency with white paint, but it didn't look very realistic.

The advantage to using a color laser copier for these signs, whether printing on paper or plastic, is that the image won't smear or rub off like it can with an inkjet printer.

One other suggestion … those nostalgia websites have a wealth of information when it comes to painting old Coke machines, gas pumps, and other antique items when you can't quite remember how they looked. And if you're into building your own scale vehicles, any Google search for that model year of vehicle will bring up dozens of websites with prototype photos of your vehicle. It's an excellent way to see those stock paint jobs from the 40s, 50s and 60s.