

## ***Free-mo on the Lake Michigan Shore National Train Show 2010***

The 2010 National Train Show was held just a few blocks from a Great Lake, and Free-mo made a big splash. Modelers from nine Free-mo groups across the East and Midwest (see box) brought 53 modules consisting of 108 pieces to Milwaukee to participate in what is believed to be the largest Free-mo layout yet. Was it risky to try such a complex undertaking on a national stage? Yes. But the participants, and the Free-mo standard, were up to the challenge.



**Figure 1.** The NTS 2010 Free-mo layout stretches from foreground to background. The closest module is *Livingston yard* (built by Guy Tonder, Minnesota). Photo by Liz Buchheister (SE Michigan).

### ***Free-mo groups participating at NTS 2010***

Chicago Free-mo  
Minnesota Free-mo Modelers  
Missouri Valley Free-mo  
New England Free-mo Group  
SE Wisconsin Free-mo  
Southeast Michigan Free-mo Group  
Southern Kansas Free-mo  
Western Reserve Free-mo  
Will County Model Railroad Association

The 110' x 40' layout (<http://tinyurl.com/34t8mmz>) was based on 350' of loop-to-loop mainline plus two branchlines, for a total of 540' or 8.9 scale miles of run. Two functional yards plus two staging yards provided ample space for the making and breaking of trains on- or off-line. For an engineer's eye view of the main, check out

the cab ride videos put together by Peter Keppel (Minnesota) using The Fly DV micro video camera: <http://tinyurl.com/3xsvtql> and <http://tinyurl.com/3xu2cde>. Similar videos of the branchlines may become available at a future date. Run Chiefs Mike Slater (SE Wisconsin) and Tim Moran (Western Reserve)

orchestrated the activities, while two teams focused on the DCC and on the operations. Planning was done with care, a critical ingredient for an undertaking of this magnitude.



**Figure 2.** *Augusta Refinery.* Module by Rob Petty, Southern Kansas, Photo by Mark Galatowitsch, Minnesota.

A stroll by the 500+ feet of modules revealed numerous carefully constructed modules, ranging from industrial to rural and from small to large. For some examples, check out the video put together by Model Railroad Hobbyist (<http://tinyurl.com/3ahehyc>). Nearly all modules in the set up were “finished” in terms of scenery (in quotes because no module is ever truly finished). Prototype locales ranged from the North Woods to the Great Plains and on to the rolling New England hills. Two crowd favorites were Augusta Refinery and North Canal Street Bridge. The prototype Mobil refinery in Augusta, KS is now gone but it was served by the Frisco and Santa Fe; the track plan of the module was modified to fit it into a practical modular footprint. The impressive structures on this module were a large kit-bashing project that used components from Walthers, Pike Stuff, and Plastruct with some scratch building for good measure. Over 90 incandescent lights bathed the Augusta Refinery with a realistic glow, and served as a beacon to draw crowds from across the room. The North Canal Street Bridge module is based somewhat loosely on a Chicago prototype. The Walthers bascule bridge kit on this module was modified by re-gearing it with RC car gears, which greatly improved its slow-speed motion. The bridge is operated via a Digitrax 4-function decoder, which also controls the navigation and other LED lights. The water was made with Clear Cast polyester casting resin. The NMRA judges clearly were impressed with the Free-mo modeling, bestowing

First Prize for best module to the Augusta Refinery (Rob Petty, Southern Kansas) and presenting Honorable Mentions to U.S. 69 (Ricky Keil, Southern Kansas) and Bill's Farm (Bill Gawthrop, SE Michigan). No doubt more awards could have been collected had more modules been entered for NMRA judging. In addition, Railroad Model Craftsman approached A.J. Murphy (Minnesota) about preparing an article about his North Canal Street Bridge module. Look for that in future RMC issues.



**Figure 3.** *North Canal Street Bridge.* Module and photo by A.J. Murphy (Minnesota).

Numbered clearance cards allowed for up to 32 Locomotives or mu'd sets to be on the layout at any one time. Up to 16 trains were allowed access to the mains at any one time, though with that many looking for track time, there was a significant amount of time spent waiting for clearance. The DCC team (Darren Voorhees, and Tom Johnson, Minnesota and James Koretsky, New England) made sure plenty of power was provided to run these trains. The electrical system included eleven boosters plus one command station. Multiple Loconet repeaters were used. Technicians from Digitrax were attending NTS and they visited the layout and advised on the DCC. The DCC crew did an admirable job planning for this event and then diagnosing and fixing problems when they arose.

Most hours consisted of "informal" running when individuals were free to operate mainline trains and routes of their choosing. During informal running, mainline control consisted of crews simply watching for each other, with some assistance from yardmasters. However, even on a layout this large, driving trains aimlessly gets old fast. The Operations team (Bob Sterner, Minnesota, Bill Gawthrop, SE Michigan, Tim Moran, Western Reserve, and Paul Shattuck,

Southern Kansa) were making plans far in advance of the meet. A brief “formal” session using Track Warrant control was held but suffered from limited FRS/GMRS equipment plus a noisy background environment. The “locals” were a more successful portion of the operations scheme. During all run hours, formal or informal, a car card plus waybill system continuously routed ~175 freight cars around the layout. Seven different local jobs were used for car routing; these included switching of mainline and branchline industries as well as yard-to-yard transfer runs and yard crews stationed at the two functional yards. Participants brought car cards for the freight cars for the industries on their own modules, and waybills were made in advance by yours truly (Bob Sterner, Minnesota) using an Excel spreadsheet utility developed for this meet. The car card system proved adaptable and intuitive for operators; best of all, once set up it ran all weekend with little intervention. Crews signed out the seven rotating local jobs at a central operations desk. In addition, numbered Train and Loco Clearance Cards were also signed out and returned to the central desk. The DCC group maintained a list of locomotive decoder addresses, which eliminated the possibility of address conflicts arising on the layout. All of these operations systems required prior planning and up-front effort, but they proved to be nearly self-sustaining during the meet, letting participants focus on the trains on the layout, the whole reason for being there.



**Figure 4.** *Bill's Farm.* Module by Bill Gawthrop (SE Michigan), photo by Mark Galatowitsch (Minnesota).

The success of this event was due to the hard work and dedication of the many modelers and operators who contributed, and fundamentally it was due the Free-mo standards themselves. Most of these local groups had never set modules up

with each other before, and for a layout of this size and complexity to come together and function was a true acid test. “Pre-flight” module checkout helped. A few reversed Jones plugs, incorrectly installed UP-5s and other transgressions were identified and corrected before or while modules were being hooked together while these problems were still isolated and therefore more easily diagnosed.



**Figure 5.** *Little Arlington.* Module by Stuart Brorson (New England), photo by Mark Galatowitsch (Minnesota).

Were lessons learned? Sure. For one, for meets of this size, availability of many good quality FRS/GMRS radios with headsets is essential for Dispatcher control, and our radio communications were not up to the task. Another lesson had to do with different types of throttles. The complex DCC system was reliable during most run hours. Most problems that did occur involved the wireless systems. Both simplex and duplex Digitrax systems were included as well as JMRI-based WiFi throttles. Operators who brought fall-back throttles with long tethers were happy they had back up. Finally, derailments were a rare occurrence over most of the layout but a few spots, particularly on the newest modules, needed additional TLC to bring them up to the same standard of operational reliability. It's hardly a lesson specific to this event, but thorough testing of modules ahead of the crucible of the actual meet is a crucial step. Without the vast majority of the layout being well proven ahead of time, gnarly problems would have been common and run time lessened.

The intense but fun-packed weekend created warm fellowship. After hours, participants enjoyed good food, cold beverages and warm conversations in

downtown Milwaukee. Most attended an Open House hosted by the North American Prototype Modelers, a truly inspirational Milwaukee layout. The high-stress, high-effort, high-expectation environment of a large Free-mo weekend could be the perfect set of ingredients to send everyone home unhappy. On the contrary, the successes and enjoyment of NTS 2010 overcame all. We thus end this report with some of the comments posted to the group list in the days following the event. These comments remind us that the model railroad hobby is about trains, certainly, but it's also about people:

*"I met a lot of great people and had a great time!"*

*"I really felt we were able to mesh all the groups together even though most of us had never met in person prior to the show. This says a lot about the Free-mo Standard and our European friends who started this all 29 years ago."*

*"I had a great weekend and enjoyed meeting other people who are nuts enough to lug their "stuff" all over the country!"*

*"I had a blast and really enjoyed myself."*

*"Everyone was fantastic and it was a pleasure to work and have fun with each and every one of you."*

Based on what occurred during that July weekend in Milwaukee, it is clear that Free-mo in the Central and Eastern Time Zones is alive and well. There are many modelers in this part of the country looking forward to future national, regional, and cross-group layouts.

***Report filed on behalf of the NTS 2010 North American Free-mo Modelers by Bob Sterner, Minnesota Free-mo Modelers.***