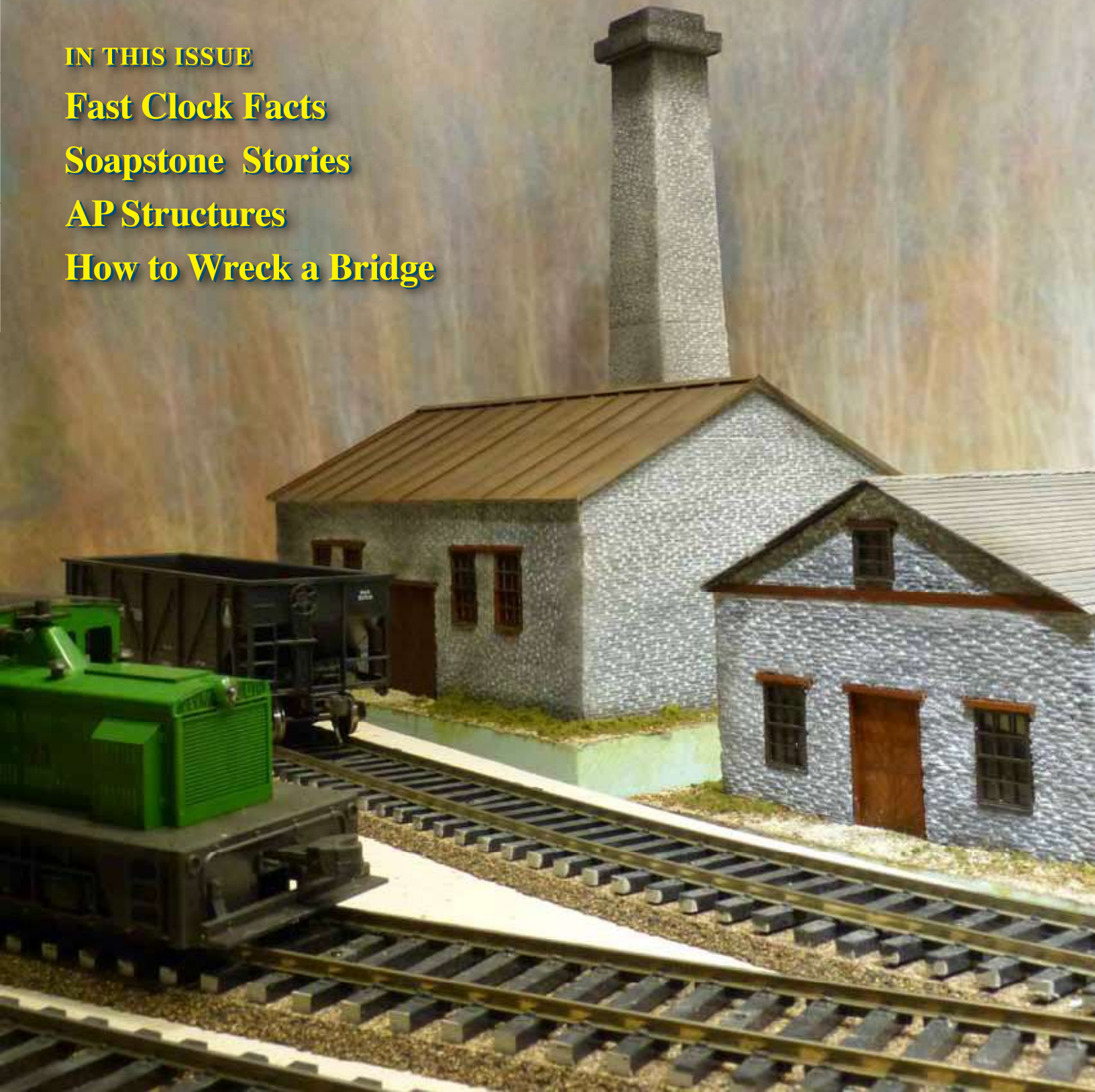# Crossties

IN THIS ISSUE

Fast Clock Facts

Soapstone Stories

AP Structures

How to Wreck a Bridge

PRODUCT REVIEW
WiFi Fast Clock System

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In March of this year, Model Railroad Control Systems (*www.modelrailroadcontrolsystems.com/*) released a new fast clock product called "WiFi/Ethernet Fast Clock System." The product was actually created and is supported by a gentleman named Andrew Deak, a model railroader and a very technically-knowledgeable individual. The WiFi Fast Clock System gives modelers an alternative to running wires to analog clocks and digital displays installed throughout their train room.

The WiFi Fast Clock System supports digital displays, analog clocks and even browser/tablet-based displays (e.g., PCs, notebooks, tablets, and smartphones), all connected via a WiFi Gateway. The fast clock system is totally independent from a model railroad layout's wiring and control systems. The primary components of the system are shown in Figure 1. The user downloads the Microsoft Windows-based Fast Clock Server software from the Model Railroad Control Systems (MRCS) website. The WiFi Gateway, which includes a 110-volt power supply and comes totally preconfigured, is connected to the user's router via a user-supplied Ethernet cable. The Gateway creates a wireless local area network (2.4 GHz) that communicates with the digital displays, analog clocks and browser/tablet-based displays that the user sets up. Each digital display and analog clock provided by MRCS includes a 110/220-volt (50/60 Hz) input/5-volt (500 mA) output power supply (my "wall wart" power supplies came with 58-inch cords) that connects to the back of the display or clock via a micro-USB connector.

Figure 1: WiFi Fast Clock System: Windows-based server software connected to a WiFi gateway; digital displays and analog clocks connected to the server via the wireless local area network.
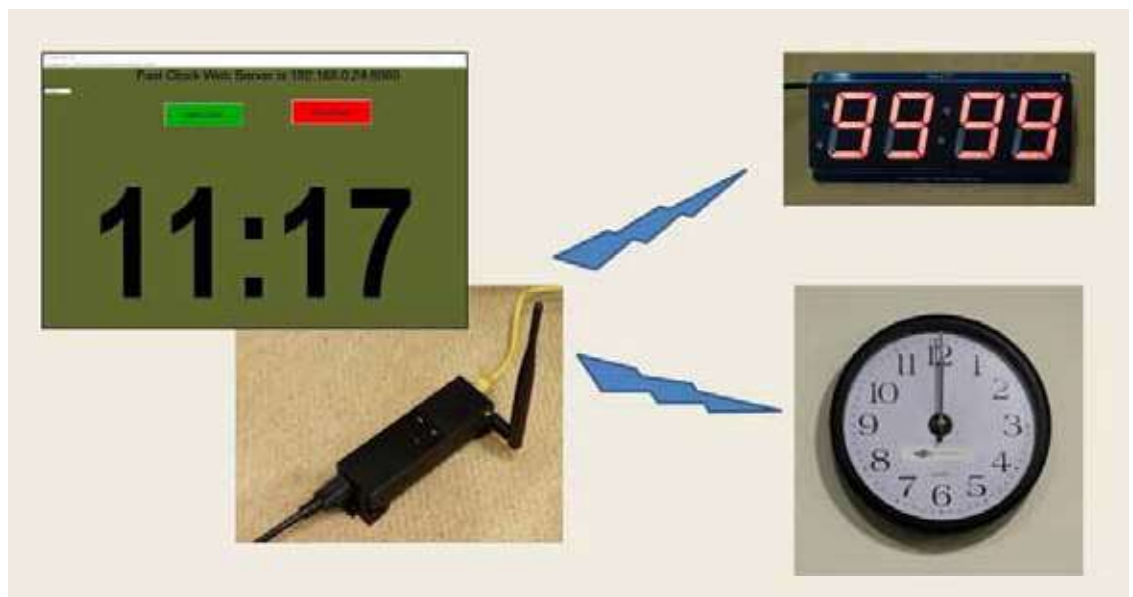
Mini-WiFi boards connected to each digital display and analog clock enable the device to receive wireless local area network signals. The Fast Clock Server provides total control over digital displays – setting the start time, controlling the fast clock operation, and stopping the display on command. Since the analog clocks are standard wall clocks that have had their mechanisms altered to support WiFi and fast clock capabilities, the user must manually set the desired start time of the clocks. Once set, however, fast clock operation and control over starting and stopping the analog clocks is facilitated automatically through the Fast Clock Server software via the WiFi network.

The Microsoft Windows-based Fast Clock Server software is the heart of the system. The server software menu, shown in Figure 2, enables you to "Set Fast Clock" by selecting the desired
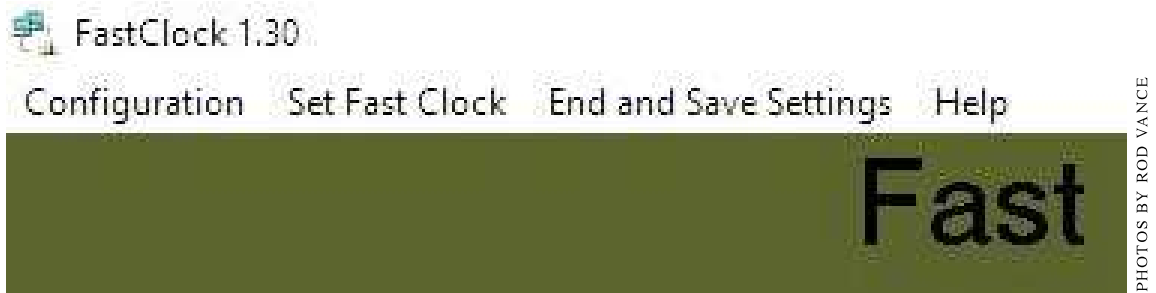
*Figure 2: Fast Clock
Server Menu*

fast clock ratio (current ratios include 1:1, 2:1, 3:1, 4:1, 5:1, 6:1 and 8:1) and the start time for your system. Buttons on the server screen allow you to start and stop the fast clock system as you desire. When you wish to end your session, the menu includes an "End and Save Settings" selection that saves your fast clock ratio and current time so that you can begin your next session exactly where you left off. A "Configuration" menu selection enables you to fine-tune the running of your analog clocks if you so desire for your particular operating environment. (I found that my analog clocks were running slightly faster than the server/digital display, so I adjusted the configuration settings to eliminate this difference.) The Fast Clock System has been designed to be operational with minimal effort on the part of the modeler – download and install the server software, connect the WiFi Gateway, turn on the clocks and displays, and you're ready for operations.

*Figure 3: WiFi Fast
Clock Starter System*

        The various components of the WiFi Fast Clock System are available individually from MRCS. The vendor also offers a WiFi Fast Clock Starter System, shown in Figure 3. This starter system provides all of the components that you need to setup your fast clock system, including:
•   The server software (available at no charge; downloaded by the user);
•   A pre-configured WiFi Gateway and power supply (user must provide an Ethernet cable);
•   One digital display (1.2" 7-segment, 4-digit display) with power supply, and bezel and connection nuts and bolts for mounting the display in a clock box or layout fascia; and
•   One 10" analog clock (plastic clock with glass cover) and power supply.
        When ordering the system, the user can request from MRCS that a second analog clock or digital display be substituted for the other clock/display so that you receive two analog clocks

or two digital displays rather than one of each. The user can request this option via an e-mail message sent to the vendor after the order is placed. As shown on the vendor's website, additional analog clocks and digital displays can also be ordered. (Please note that product styles and descriptions are subject to change. Check the MRCS website for currently available products and associated pricing.)

Once you place your order, MRCS coordinates with Andrew Deak and he configures your fast clock system. Depending on Andrew's workload and the availability of components, it takes approximately 2 – 3 weeks to configure a system. Once your system is complete, it will be shipped to you and you will receive an e-mail accordingly.

I purchased the WiFi Fast Clock Starter System plus one additional 10" analog clock. My system came well packaged but with minimal installation instructions. Complete instructions (PDF file) for downloading and installing the server software and for installing your fast clock system are available on the MRCS website on the WiFi/Ethernet Fast Clock System product page (look for the "Fast Clock Manual" link).

As noted, building and supporting the WiFi Fast Clock System is currently done by a single individual, Andrew Deak. If Andrew is inundated with orders (perhaps a nice problem to have) or disappears on vacation, your order may be slightly delayed. The advantage, however, is that your order is receiving personal attention from the product's creator. I've spoken at length to Andrew about his system, and he's not only a very technically-knowledgeable individual (computers and computer networks), but he really cares about the quality of his product and wants every modeler to be fully satisfied with their purchase.

So there you have it – the new WiFi Fast Clock System from MRCS and Andrew Deak. This new system provides modelers an alternative to running wires to fast clocks installed throughout their train room. If you're looking for fast clock operations and like the idea of using a wireless local area network to support those operations, I highly recommend that you consider this new product.