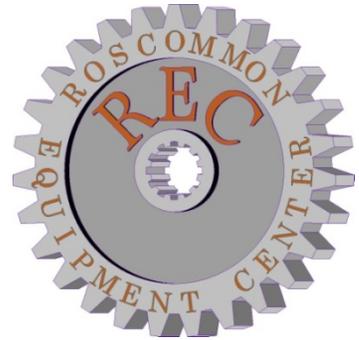
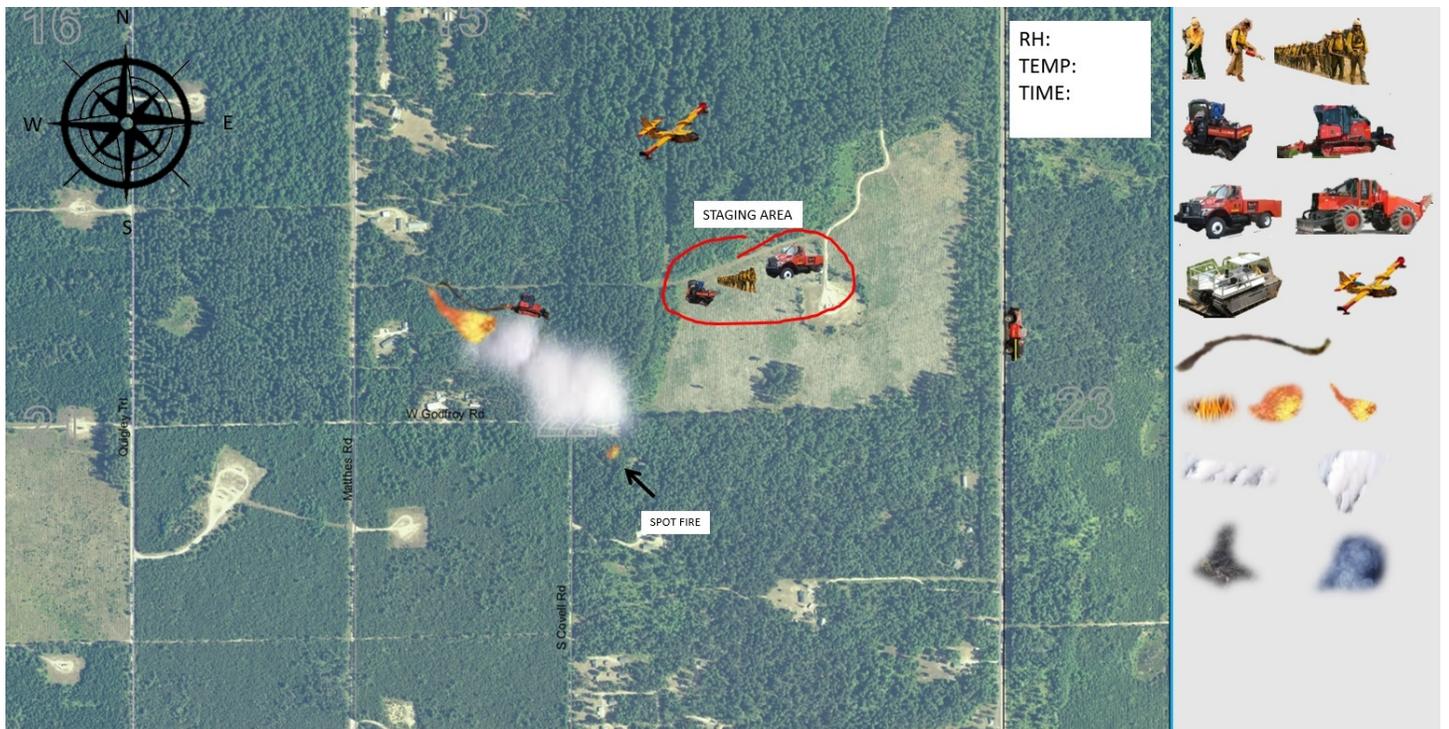


Roscommon Equipment Center



NewsNote #22
September, 2017



Simple Electronic Sand Table

National Association of State Foresters
in Cooperation with
Michigan's Forest Fire Experiment Station

REC NewsNote No. 22

Simple Electronic Sand Table

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Disclaimer

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Introduction

The Roscommon Equipment Center (REC) and MIDNR staff have once again worked together to develop a simple to use, electronic sand table. This sand table allows for ease of setup, transportability, saving event scenario's, no mess and photo realistic renderings of any given wildfire or other emergency event.

Michigan has, over the years produced a classic version of a sand table that was essentially a hinged wooden box that unfolded into a tray and was filled with a crushed media such as walnut shells. The crushed walnut shells were formed by hand into a rough representation of the topography of the geographic area that was to be studied by fire staff. Objects such as childrens' toys, poker chips, popsicle sticks & yarn were then placed on top of the walnut shell terrain to simulate wildfire equipment, personelle and other physical objects such as railroad tracks and ponds/streams.

This system has been used for years' and is still effective.

A few of the challenges to using a classic sand table include fabrication costs, transport difficulties,setup/teardown time, mess, non-realistic representations of equipment or terrain features and no ability to save or share the created scenario with others whom might not be present for the scenario being studied.

REC studied the operational issues associated with classical sand tables with Michigan fire staff and together came to the conclusion that a new system was needed to mitigate the challenges of using a classical sand table.

The Simple Electronic Sand Table was created to satisfy this need.

Design

REC staff worked directly with MIDNR staff to fully understand tactical & logistical needs for this system.

By design, the system needed to address every challenge presented by a classical sand table, be low cost, easily transportable, use photo realism, be able to save & share scenario's and maybe most importantly be simple enough for almost anyone to be able to use it with a very short learning curve & basic understanding of the Microsoft Office software: Power-Point.

Basically, the Simple Electronic Sand Table system is just using the capabilities of Microsoft Power-Point in a way that may not have been considered before.

The scenario or wildfire event is created inside Power-Point as if you were going to make a slideshow presentation, without actually running the slideshow. Superimposing wildfire equipment, personelle and other needed resource images (even video clips to visually show fire behavior) on top of a base aerial image photograph of the geographic area in which the scenario is or has happened. The scenario can be displayed on any computer that has Power-Point installed on it and can be projected from the computer onto almost any flatscreen television (for displaying to a large group of people).

Superimposing photo's on top of a base aerial image gives the user the ability to:

- 1.) Move the resource images around the base photo at will.
- 2.) Rotate resource images (to denote the direction they are/were heading).
- 3.) Re-scale the resource images as appropriate for the base image.
- 4.) Copy/paste resource images to create multiple copies

Other advantages of using images within Power-Point include the ability to:

- 1.) Edit these individual resource photo's directly inside Power-Point without using an auxillary program. It is possible to trim away the background from an image the user wants to use to show only the piece of equipment and not the background the piece of equipment was in when the original photo was taken.
- 2.) Group/Un-group text boxes to resource photo's so that a label can be moved/scaled with the resource photo.
- 3.) Mirror a resource photo to create for example: a tractor-plow unit heading in a direction opposite from which the original photo was taken, using the photo's bounding box drag points.
- 4.) Shapes can be drawn freehand or with stock shapes directly on the base aerial image. These can then be modified to create photo realistic features such as smoke, flames, burned over area's or other such items. Photo's of smoke, flames etc..can be applied as an "area fill" to the shapes that you create instead of just filling these shapes with a solid color.

Appendix A

For further information regarding this or any other REC product or project , please contact the REC Program Administrator at:

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