

TIPS

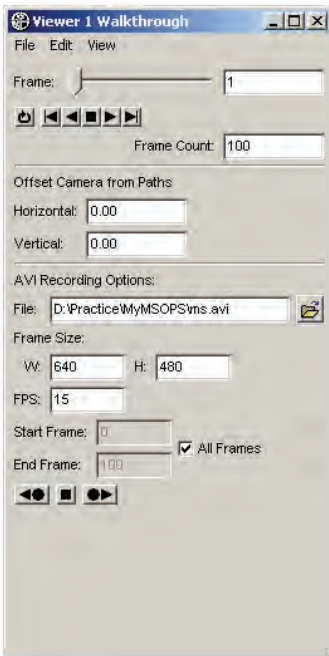
from



Tech Support

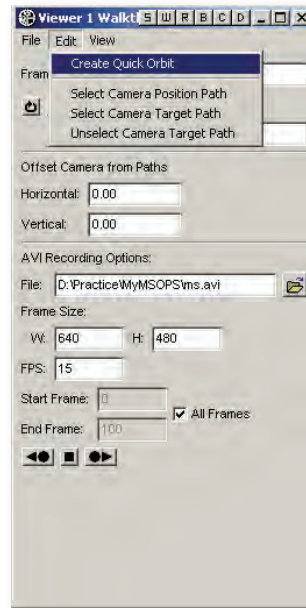
The Walkthrough Tool:

An excellent way to create videos to present your MineSight® creations



Overview

Accessed through the **Tools** pulldown menu from within MineSight® 3-D, the **Walkthrough** tool is an excellent way to create a video to display your MineSight® creations such as an economic pit design, leach pad design, or end-of-period maps. The AVI (Audio Video Interleave) video can be played within Microsoft® Windows Media Player or Microsoft® PowerPoint for use in presentations. This article will describe two simple yet powerful



The **Edit** menu is where the user can select to create a simple video (**Create Quick Orbit**), select the camera position (**Select Camera Position Path**) and select/unselect the camera target (**Select/Unselect Camera Target Path**) as shown on the left.

The **View** menu (**View | Show Paths**) allows the user to view (checked) or hide (unchecked) the blue View Orientation Lines.

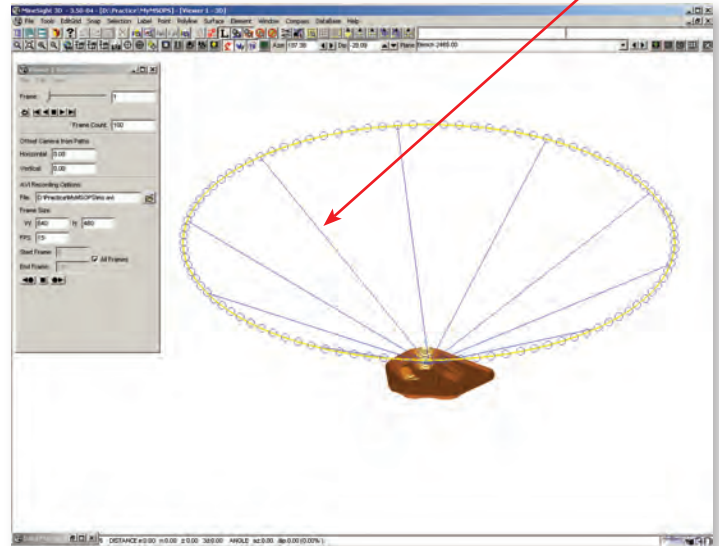
processes by which AVI videos can be created utilizing this tool.

Background

An AVI video is created by capturing many still pictures and then organizing them into a desired sequence. These pictures are captured according to a "Camera Position Path" and "Camera Target Path" (which can be a point, polyline, or polygon) to determine the viewpoint of the camera (the position from where you are looking) and the location on which the camera is focused (the position at which you are looking).

The Pulldown Menus

The **File** pulldown menu is where the user can select to either save (**File | Save**) or load (**File | Load**) Walkthrough tool configuration responses such as **Frame Count**, video file storage location, and the **FPS**.



(continued on page 8)

(The Walkthrough Tool: An excellent way to create videos to present your MineSight® creations continued from page 7)

The Walkthrough Tool Panel

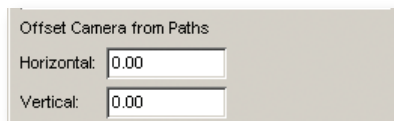
Frame



The uppermost portion of the dialog box is where still pictures are created / previewed. The **Frame Count** specifies the number of

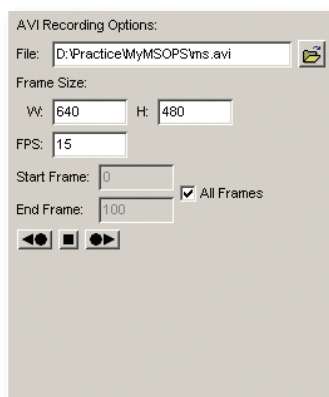
still pictures that will be created (the larger the frame count, the longer the video duration time to create the video and vice-versa). The pictures are created by clicking the play button . The other buttons can be used to view the pictures as desired (from left to right): loop, rewind to beginning, play backwards, stop, play forward, forward to end.

Offset Camera from Paths



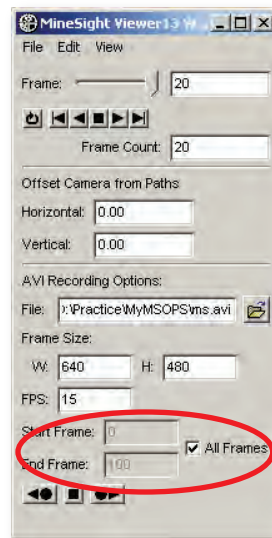
The center section **Offset Camera from Paths** allows the user to quickly modify the camera location and target by designating a specific horizontal and vertical distance in order to “fine-tune” the viewing of the pictures.

AVI Recording Options



The lower section labeled **AVI Recording Options** contains a default file name for your video called **ms . avi** and will be stored in your project directory. The user can specify a different name/location to store the recorded video file by clicking the button, choosing a storage location, typing a file name,

and clicking **Save**. Because of increased processing requirements (time, memory) needed for larger pictures, the default picture **Frame Size** is 640 pixels wide (W) by 480 pixels high (H). Larger pictures can be modified as desired. The **FPS** number refers to the number of Frames Per Second. A large **FPS** value will result in a smoother transition between frames and a larger resultant file size, whereas a smaller number will result in more “choppy” video and a smaller file size. The default value of 15 is a good value with



which to begin, as it is a compromise between file size and smoothness. All picture frames will be recorded by increasing number if the **All Frames** box is checked and the Record Forward button is pressed. Frames will be recorded in a decreasing order when the Record Backward button is pressed. A range of frames may be specified by unchecking the **All Frames** box and pressing either the Forward or Backward Record buttons.

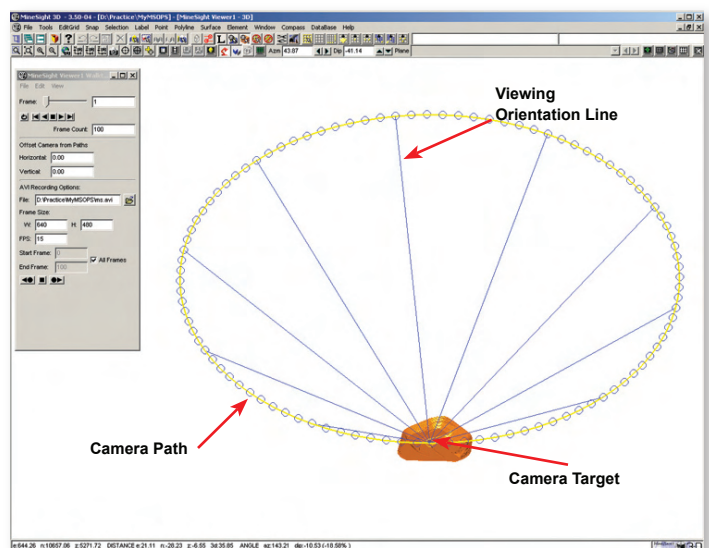
Simple Video Setup

This setup requires that the user have at least one MineSight® object displayed within the viewer and will create an orbital view of the objects displayed.

Steps:

- 1) Open desired MineSight® objects and display them prominently in the viewer.
- 2) Open the **Walkthrough** tool by clicking the icon on the MineSight® taskbar or **Tools | Walkthrough Tool**.
- 3) Within the **Walkthrough** tool, click **View | Show Paths**, then **Edit | Create Quick Orbit**.






The viewer should now appear similar to the one shown below:

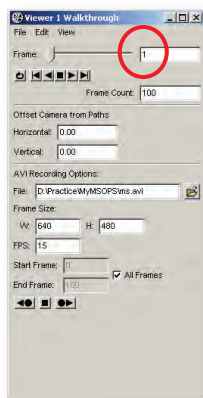



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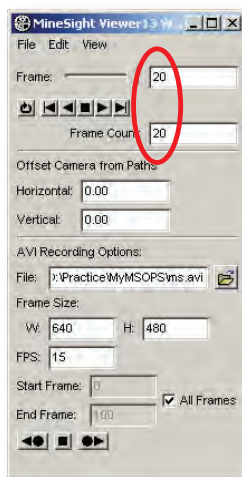
(The Walkthrough Tool: An excellent way to create videos to present your MineSight® creations continued from page 8)

The large circle shown above the object, is the path taken by the camera. The blue lines represent the viewing orientation and the single point where the blue lines intersect is the camera target (the point at which you are looking).

- 4) To preview the video click the Play button  at the top of the dialog box. When finished, press the Rewind button . To loop the preview, press the Loop button , then press Play .
- 5) To begin recording the video at the first frame, press the Rewind button ; the **Frame:** value should be 1 (see below).

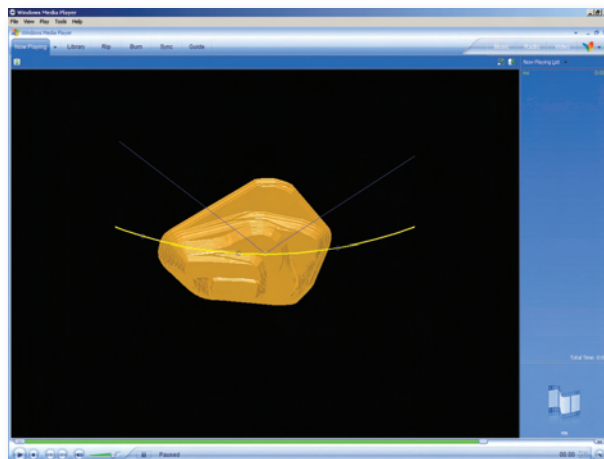


- 6) To begin recording, press the Record Forward button  under the **AVI Recording Options** section and wait until the number of frames recorded equals the **Frame Count** number, see dialog next column.



- 7) Go to your project directory and open **ms.avi** with an appropriate media player such as Microsoft® Media Player.

Results



Complex Video Setup

A complex AVI video might be one where the camera path follows a haulage route or zooms in and out of an area while various objects such as cuts, drillholes, open pits, phases, block model, or surfaces appear/disappear as desired. The following steps can be used to create such a video:

Major steps

- 1) Decide the desired quality and size of the video (the better the quality and larger the size, the more resources will be used, i.e. memory, processing time).
- 2) Decide which objects to be seen and when they are to appear.
- 3) Decide the manner in which the objects are to be seen, i.e., following a specific route or path, from a desired viewpoint, etc.

Shown below are each of the previously mentioned major steps with additional minor steps that will need to be implemented to create the video.

Major and Minor steps:

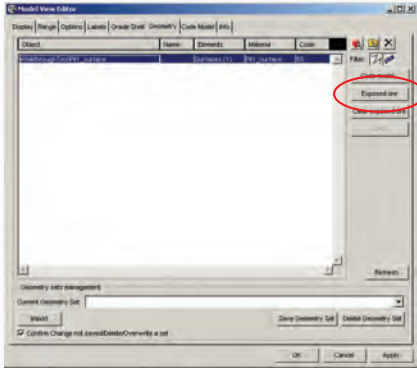
- 1) Quality and size of the video.
 - a. **Frame Count:** increase as desired.
 - b. **Frame Size, FPS:** Use default values until video creation is nearly complete, then modify to desired size. This will help shorten processing time.
- 2) Which objects are to be seen and when.
 - a. Within the **Data Manager**, create a new folder called MyVideo in which to place copies of all objects used/viewed in the video.

(continued on page 10)

(The Walkthrough Tool: An excellent way to create videos to present your MineSight® creations continued from page 9)

- b. Create subfolders within MyVideo such as SEQ1, SEQ2, etc., which contain objects to be opened/ closed, as a group or individually, at a specific time during the recording of the video.

*Hint: To view a more meaningful mining pit surface, use the **Exposed Ore** function within a block model.*



- 3) The manner in which the objects should be viewed.
 - a. Camera Path.
 - i. Digitize a polyline, polygon, or point using the **Polyline** or **Point** menu options (and possibly the **Point Editor**), as the path

for the camera to follow.

- ii. Modify the horizontal and vertical **Offset Camera from Paths** as desired.

*Hint: If you want to follow a haulage route, make sure to select **Face Snap** under the **Snap** menu so the polyline/ polygon will be on the road surface.*

- b. Camera Target.
 - i. Digitize a polyline, polygon, or point using the **Polyline** or **Point** menu options (and possibly the **Point Editor**), as the path for the camera to follow.

*Hint: Use the **Polyline | Offset Polyline** and **Element | Move** functions to create a camera target that is offset and ahead from the camera path.*

Putting it all together...

After the above major and minor steps are completed, use the following steps to record the video:

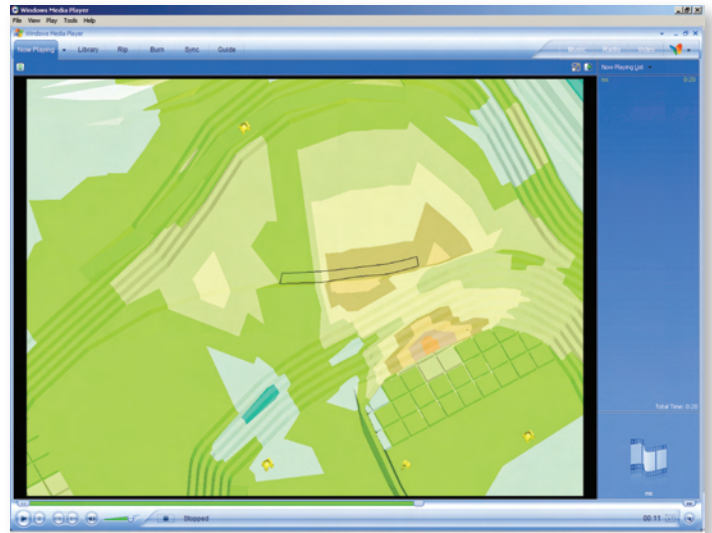
Within the **Walkthrough** tool –

1. Go to **View | Show Paths**.
2. Go to the **Edit** menu and select **Select Camera Position Path**, then **Edit | Select Camera Target Path**.
3. Preview the video using the Play, Stop, and Rewind buttons within the **Frame** section and modify the camera path and target polylines, polygons, and points to obtain the desired view orientation. This is an iterative process.

4. Rewind the video to Frame 1 by pressing the button.
5. Record the video by pressing the Record button then selecting one of the video compression modes as desired.
6. Open and close objects within the **Data Manager** as the video is being recorded and wait until all frames are recorded.

Hint: Increase the number of frames to 200 or greater to allow time to open/close multiple objects.

The Final Product



Open any AVI compatible video player to view your newly-created video.

Other suggestions:

- 1) When the camera is inside a tunnel or an open pit and you wish to see an “inside” view of the object, change the **Viewer Properties | Projection** setting to **Perspective** instead of **Orthographic**.
- 2) To display multiple items on multiple bench elevations, use multiple block models specifying various **Range** settings.
- 3) To add trucks, shovels, and other equipment to visually emphasize picture scale, use the **Surface | Create Solid | Insert Shape** function.
- 4) To display MineSight® Interactive Planner mining cuts, open Geometry View Objects.
- 5) To display the actual pit surface or surrounding area, use the **Texture Surface** tool.