

VIRTUAL REALITY WORLD OF SUNDIALS ~ you can walk around them. Earlier Windows XP systems and current Vista win64 as well.

VRML and later X3D is to 3d virtual reality what HTTP is to text and simple graphics. With VRML you may maneuver around 3d objects. Illustrating Shadows brings virtual reality to both web users as well as to stand alone computers when it comes to sundials.

Web browsers (Netscape, Mozilla, Internet Explorer) do not support VRML or X3D directly, they need a plugin. There are several plugins, for XP and Vista win64 the Cortona plug-in is the most current. **BOTTOM LINE:** for internet stored worlds, use the Cortona Plugin.

File browsers for large virtual worlds: if the virtual worlds are on your computer and not on the internet, then you may use Instant Player on Windows Vista, or you may use Internet Explorer with the Cortona plugin if you are using Windows XP. **BOTTOM LINE:** for worlds stored on your computer use INSTANT PLAYER for late XP service packs or Vista, and Cortona for early XP systems. **NOTE:** If Internet Explorer and Cortona are setup correctly, and the .wrl/.wrz associations correctly set, and you tell Internet Explorer it is ok to do things with activex, several times, then all will work, if you screw that up, use Instant Player.

File Browsers for small sundial models: the Cortona Browser plugin works if internet based, for computer based it also works for old XP systems. For later XP systems or Vista use SWIRL., but see **note** above. The following are free of charge.

CAUTIONS: Using a web browser with a plugin for computer (as opposed to internet) files may get you into a circle of the computer asking permission to open the vrml (.wrl and .wrz) file which never ends, so, use INSTANT PLAYER instead. See **note** above. Cortona may crash your Vista win64 computer once or twice, however persevere and it will work very well.

Useful links: cic.nist.gov/vrml/vbdetect.html a useful set of links for misc operating systems and computers
www.cortona3d.com/cortona the plugin for most browsers, for internet based worlds and models.
www.instantreality.org INSTANT PLAYER works standalone and lets Windows Vista users view computer stored worlds in vrml which is helpful since Vista and later XP service packs prohibit a web browser with a plugin from viewing local files which they allow if from the internet. For small computer based models use SWIRL, but see **note** above..
www.pinecoast.com SWIRL is a good viewer for small models stored on the computer (for worlds use INSTANT PLAYER)

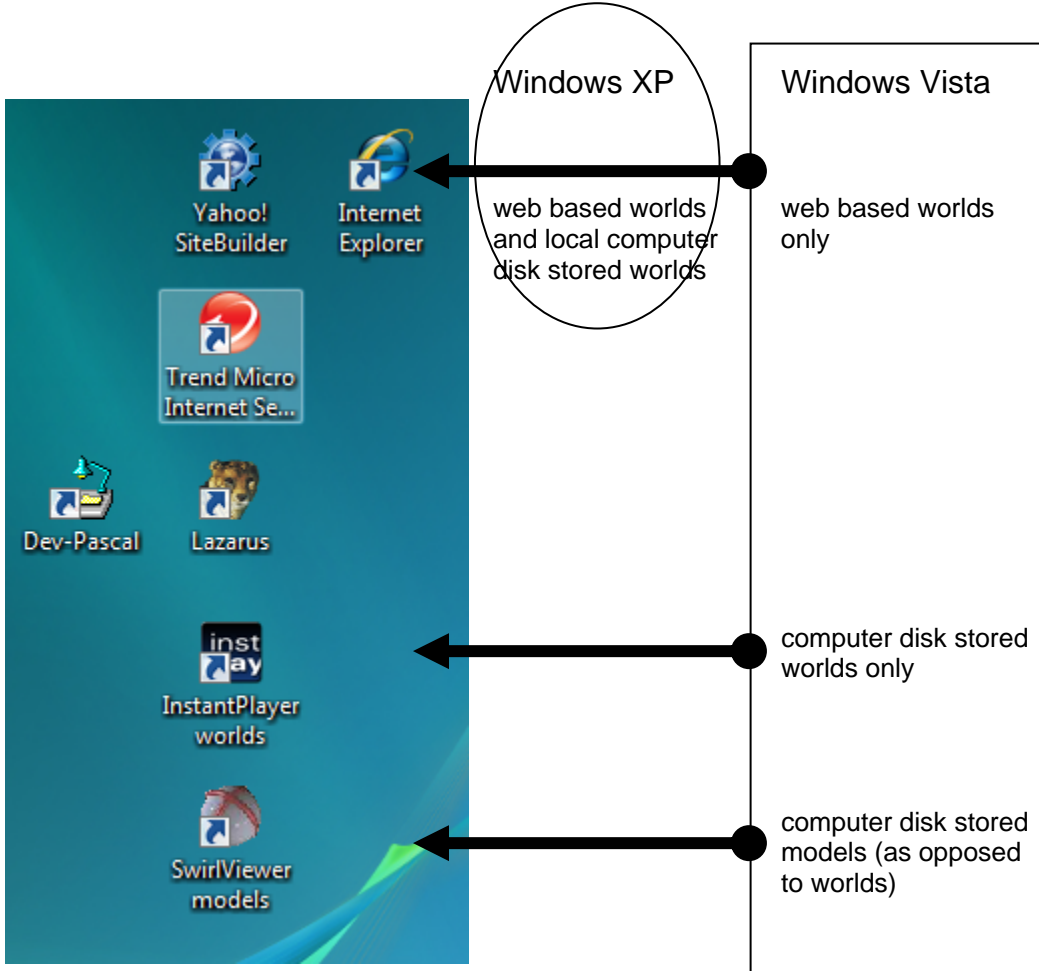
WINDOWS: Browser plugin: **Cortona**
Navigation uses the mouse and SHIFT or CTRL speeds it up. Hyperlinks to other worlds may or may not work depending on how Windows feels that day. Works for large worlds and small models if internet based, and for computer based files an earlier XP system. If later XP or Vista and computer based then use INSTANT PLAYER for large worlds such as Jaipur, or Swirl for small models.

Standalone browser [Instant Player](#) Works for full scale worlds stored on your computer, worlds such as Jaipur Observatory, not as good for small models.

Standalone [small model viewer](#) The Swirl Viewer from Pine Coast works very well for small models of sundials, not usable on large worlds.

Another [standalone viewer](#) An alternative to Pine Coast's Swirl viewer.

THE THREE PROGRAMS ON A VISTA DESKTOP



FILE ASSOCIATIONS AND ENABLING BROWSER PLUGINS

File associations can cause problems, so Cortona may set .wrl and .wr t Internet Explorer, Instant Reality may set it to them, and so on. Just keep an eye on it, and learn how to change file associations if it causes problems.

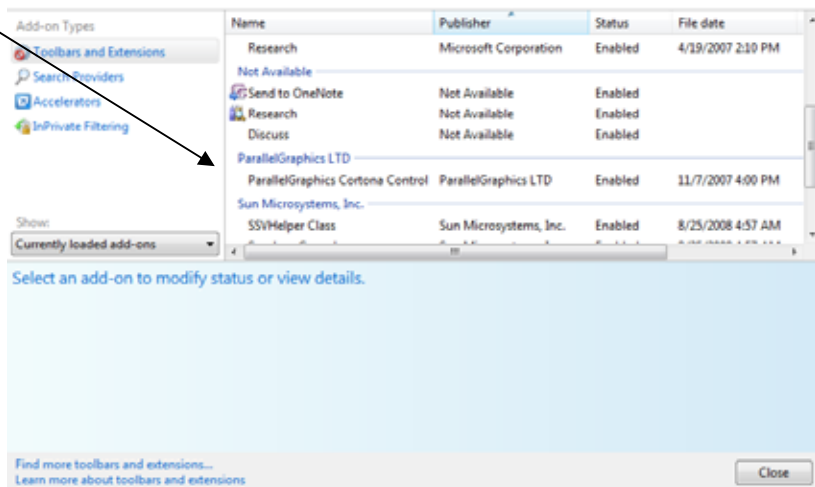
To view or change a file association in VISTA:-



Bottom left of Vista screen, click, DEFAULT PROGRAMS and then ASSOCIATE A FILE TYPE and then locate .wrl and .wrz and select CHANGE and then select INTERNET EXPLORER or INSTANT REALITY

Just because Cortona is installed, and just because the Cortona web site says it is installed, and just because file associations say .wrl/.wrz links to Internet Eplorer, does not mean that that will happen. Go to Internet Explorer and do TOOLS, MANAGE ADDONS, and see if Parallel Graphics is there.

View and manage your Internet Explorer add-ons



If not then reinstall.

Once installed, you can always disable temporarily that association between Cortona and Internet Explorer.

Enabling the Cortona plugin in Internet Explorer in no way interferes with Instant Player being able to manage the same world when stored on your local disk hard drive, nor does it interfere with SWIRL being able to display .wrl models.

NOTE: If Internet Explorer and Cortona are setup correctly, and the .wrl/.wrz associations correctly set, and you tell Internet Explorer it is ok to do things with activex, several times, then all will work, if you screw that up, use Instant Player.

NAVIGATING THE WORLDS

In Internet Explorer with Cortona

use the mouse or the arrow keys
you can walk through walls

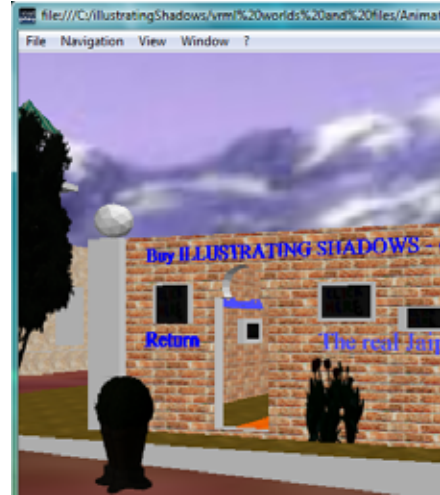
INSTANT REALITY

FILE / OPEN FILE

and open a disk file, while it will let you
open a web site, do not, since there are
many items it will not be able to find.

NAVIGATION / MODE / FLY

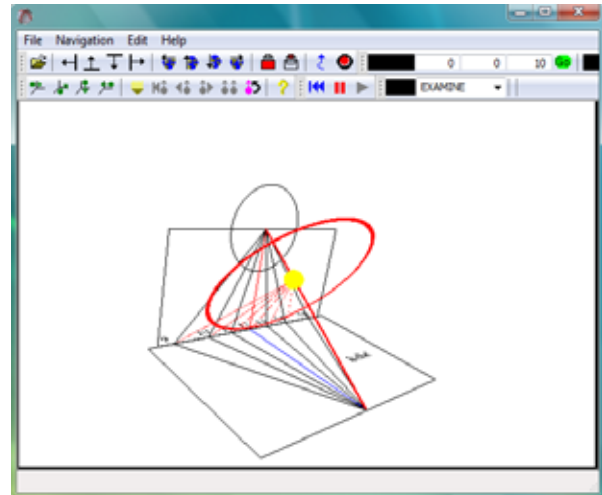
then + + + + to speed up motion
then mouse to the door and go through it,
if you hit an object
you will stop, so back up and retry



SWIRL

FILE / OPEN / VRML / then
select an object
(must be vrml version 2
and some Illustrating
Shadows models are
version 1)

then use the mouse to rotate it.



NOTE: If SWIRL will not display a model, it is fussier about the version of VRML, then use Instant REALITY or Internet Explorer with Cortona. EG: [vrml-dial-column.wrl](#) does not work in SWIRL but does in Instant Reality and Internet Explorer. Whereas [durer-2d-vbs.wrl](#) works very well in SWIRL.

THE FINE PRINT STUFF ~ IF YOU HAVE TROUBLE READ THIS

Internet Explorer MAY **block the VRML as a pop-up**, let it proceed. Consider the TOOLS, INTERNET OPTIONS, ADVANCED, ACTIVE CONTENT feature in IE.

Internet Explorer may need you to tell it to **check the cache versus the web** site. Consider TOOLS, INTERNET OPTIONS, GENERAL, TEMPORARY INTERNET SETTINGS, EVERY VISIT TO THE PAGE or AUTOMATIC.

CORTONA FIT helps **if the vrml model seems tiny, but only with models, avoid using it on full worlds.** **STUDY** lets you manipulate the object Mouse and arrow keys allow navigation. RIGHT CLICK brings up options, including other viewports.

In CORTONA, SHIFT key speeds movement. Right click get good things, especially viewports. In INSTANT PLAYER use the + or - numeric pad key to control navigation speed.

The main world is [simon.wrl](#), it links to simonHA (hour angle dials), simonJAIPUR, and other worlds, and those worlds have links back to the main world. Some have links to detailed vrml dial models you can manipulate. These web urls ARE CASE SENSITIVE. Some models are not in the link, so separate urls are available below.

ADVANCED NOTES ON BUILDING A VRML FILE

[This page is a copy of:-[vrml-how-to-do-vrml-READ-FIRST.pdf](#)]

A CAD file may be saved for viewing on the web in very simple steps. There are three steps depending on how your computer system is established. For people who only wish to view 3d, not generate it, steps 2 and 3 would apply. For people with a VRML browser plug-in already installed, step 3 only would apply. For designers, all three steps would apply.

1. Building a VRML (WRL) file for other to see
2. Installing the VRML browser plug-in if you do not have one
3. Viewing any 3d VRML file on the internet (WRL file suffix).

BUILDING A 3D WEB PICTURE FOR ANYONE ON THE WEB FROM TURBOCAD

In TurboCAD save as WRL: The SETUP option in the SAVE panel was set to version 1.0, do not save as WRZ which while smaller, may have browser problems on the internet

STEP 1: SETTING UP TO VIEW 3D PICTURES ON THE WEB (For designers)

Find out what plug-ins will work for you, there is a web site to advise you of your options.

VRML browser detect: <http://cic.nist.gov/vrml/vbdetect.html>

STEP 2: INITIAL BROWSER PLUGIN INSTALLATION (First time viewers)

Download manually a browser plug-in such as Cortona

Cortona VRML browser

<http://www.parallelgraphics.com/products/cortona/download/iexplore/>

STEP 3: VIEWING A 3D PICTURE ON THE WEB

- Open a VRML file (WRL)
- eg: there are several on the web site for this book.
- IF Internet Explorer gives a cautionary notice, accept it and let ACTIVE-X do its thing.
- Netscape and Internet Explorer both run Cortona well, and Cortona also works on Mozilla.
- the picture may be tiny, so zoom it by clicking FIT
- then PLAN to zoom back a bit
- then you may then manipulate the view with STUDY!

OR USE A STANDALONE VIEWER (NOT USING A BROWSER) SUCH AS:

http://www.sim.no/products/SIM_VRMLview/

ADVANCED NOTES ON ILLUSTRATING SHADOWS FOLDER USAGE

[these two pages are a copy of:- vrml notes - using ISB and ISA - folder usage.doc]

FOLDERS:

Animated Saved

ISA saves the full world plus animation in un compressed form

Animated Publish

ISA publishes to here

Publish non animated

ISB publishes to here and may have more JPGs than the ISA publish folder. AND the ISA program, when loading from Animated Saved will look here for GIF and JPG files.

After building a world in ISB, then animate it in ISA and SAVE as well as publish it. If you re-edit in ISB and save it, you will lose the animation, hence why the ISA Publish is COPIED to the ISB folder to ensure no such loss, and then the ISB folder copied back to the ISA folder to ensure all the JPG files. NEVER EVER copy the PUBLISH folders back into the ANIMATED SAVED folder, otherwise all animation is lost.

Since ISA uses the SAVED folder, in reality one PUBLISH folder could be used. But, once ISA and ISB are configured to their own folders, then ISB refers to its configured folder, and if you change that folder name then ISA will not be able to find the GIF and JPG files, so, once ISA and ISB have been used, in reality they cannot be reconfigured, [see below](#).

SO...

In ISB build and publish to

Publish non animated

In ISA, animate it and SAVE to

Animated Saved

and also publish to

Animated Publish

then copy

Animated Publish

to

Publish non animated

to get the latest animation over there, and

then copy

Publish non animated

back to

Animated Publish

to get all the JPG files

and never ever copy the PUBLISH folders into the SAVED folder

THEN...

either the Animated Publish or the Publish Non Animated folders can go to the CD accompanying the book.

ALSO...

note the files copied back from Publish Non Animated to Animated Publish, for they need to be uploaded to the web for online vrml world viewing.

```
WorldInfo
{
  info
  [
    "Author: Simon Wheaton-Smith", "Company: self", "LastSaveBy: Simon
Wheaton-Smith",
    "EditingTime: 2362"
  ]
}
DirectionalLight
{
  ambientIntensity 0.5
  direction -0.240213 0 -0.97072
}
Background
{
  backUrl "file:///C:/Illustrating Shadows/vrml worlds and files/Publish
non animated/Pan4a_Back.jpg"
  bottomUrl "file:///C:/Illustrating Shadows/vrml worlds and
files/Publish non animated/Pan4a_Bottom.jpg"
  frontUrl "file:///C:/Illustrating Shadows/vrml worlds and
files/Publish non animated/Pan4a_Front.jpg"
  leftUrl "file:///C:/Illustrating Shadows/vrml worlds and files/Publish
non animated/Pan4a_Left.jpg"
  rightUrl "file:///C:/Illustrating Shadows/vrml worlds and
files/Publish non animated/Pan4a_Right.jpg"
  topUrl "file:///C:/Illustrating Shadows/vrml worlds and files/Publish
non animated/Pan4a_Top.jpg"
}
```

Octaga:

does not support hyperlinks in the screen

Yahoo!

rejects .wrl if the file is condensed by ISB
on the upload

rename to filename.sws
upload the .sws file
rename the .sws to wrl
works well

TurboCAD

save as vrml 2.0 and not 1.0 otherwise the figures get confused