ULTIMA VI MAP EDITOR

The editor comes up with the Map and Tileset Windows on screen. In the
Map Window (left hand side of the screen), you can draw tiles by clicking
with either mouse button. The left-hand button will draw with the
"foreground tile" (shown in a yellow border in the Tileset Window), and the
right-hand button will draw with the "background tile" (shown with a purple
border.) To select different tiles for foreground and background tiles,
there are two ways to do it: click on the tile in the Tileset Window, or
hold the Shift key down while clicking in the Map Window.

If you draw into the map with one of the "map tiles" (000-0ff), the tile
number will go into the map, but all other tiles (200-4ff) go into a special
"object list." There is still a map tile under the object, as you can verify
by shift-clicking on it, but it is invisible under the object (unless the
object is partially transparent.) To delete an object from the map, hold the
Alt key down while clicking on the object. Deleting an object which contains
other objects will cause that object's contents to be deposited onto the map.

To edit an individual tile, select it as the current foreground tile, and
click on the tile with the yellow border in the Tileset Window. This will
bring up the Tile Editing Window, with a 16x16 grid of pixels for editing the
tile, and a 256-color palette. Select foreground color with left button,
background color with right button.

The last color in the palette is a "transparent color" that you can use
to see past the edges of objects. The easiest way to create a transparent
mask is to use the "FM" command (see below.) The transparent color is
constantly changing on screen, making it clear that it is not an ordinary
color.

The Shift, Ctrl, and Alt keys have a special meaning when you hold them
down while clicking in the Tile Edit Window:

Shift: SELECT - select the color pointed to (in the 16x16 tile grid) as
the current foreground or background color. Does not alter the tile.

Ctrl: SHADE - if the color is in a range between the current foreground
and background colors in the palette, this will alter the shade of the color
towards the foreground color if left button is clicked, or towards the
background color if right button is clicked.

Alt: COPY - copy the corresponding pixel from the background tile into
the foreground tile. This works with Replace Mode as well.

Clicking on the yellow bordered tile in the Tile Editing Window takes
you back to the Tileset Window. Clicking on the Undo Buffer (the tile right
below the yellow border) undoes the last change made to the tile.

The arrows around the map and tileset windows allow you to scroll the map
in all directions. The arrows around the Tile Editing Window shift the tile
definition left, right, up, or down. The arrows under the yellow-bordered
tile in the Tile Editing Window allow you to change the current foreground
tile being edited. In all cases, clicking on the arrow with the left-hand
button moves one at a time; the right-hand button moves as long as you hold
it down on the arrow.

Here are the keyboard commands used in the editor:

A   -   turn animation on or off

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C  -  copy tiles (large tileset window).
D  -  diagonal flip (when editing tile).
E  -  erase tiles (large tileset window).
F  -  set fill mode.  Asks for one of three modes:
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     'O': fill mode off. 'F': fill mode on. 'R': replace mode. 'M': create
transparent mask.

     In fill mode, the next click will fill the area pointed to with the
current color. In replace mode, the next click will replace all the colors
that are the same as the one pointed to.'

     The "FM" command creates a transparent mask around an object by filling
all black pixels with a transparent color except those adjacent to a colored
pixel. This creates a black border around the object. Black holes in the
middle of objects are also filled, which may or may not be desirable, so be
sure to check the mask after it is created.

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G  -  goto (x,y) on the map.  (ENTER to cancel).
I  -  import Ultima V tile.  Select with +- keys, then press ENTER.
K  -  Klimb up/down levels.
L  -  load (Tileset,Map,Chunks,All).
M  -  enter map editor (if in large tileset window).
N  -  next frame of animation.
P  -  plop chunk (hex #) at current location on map.  (ENTER to cancel).
Q  -  quit.
R  -  renumber tiles (large tileset window).
S  -  save (Tileset,Map,Chunks,All)
      (or Select Foreground/Background tiles from large tileset window).
U  -  undo/undelete (in map window / large tileset window).
V  -  view/cancel view (chunks seen as single tiles).
      (Ctrl-V sets the tile used in view mode for the current chunk.)
W  -  generate water animation masks.  All transparent colors and blue
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arrows in the partial water tiles (010-01b and 020-02b) become part of a mask
that is stored in a reserved area in bank 4 of the tileset.
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X  -  flip tile horizontally.
Y  -  flip tile vertically.
Z  -  zap object out of the list.  (Deletes the object in the center of the
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map window. If there is more than one object, the top one on the list (the
one visible in the map window) is deleted.)

Arrow Keys (or numeric keypad): scroll map. (scroll tileset in the large
tileset window.)

Esc -   (in large tileset window: cancel a Renumber, Copy, etc.)

Summary of Ctrl-Shift-Alt clicks:

SHIFT: Select (left button=foreground, right button=background)

CTRL: Shade (in tile editor)
        Select Object (in map editor)

SHIFT+CTRL: Enter Object Data

ALT: Background Pixel (in tile editor)
        Extract (in map editor)

click on foreground tile (the one highlighted in the yellow box at the top of
the screen):   edit tile (enter Tile Editing Window)

   FULL-SCREEN TILESET WINDOW

functions:

Copy	copy tile (red -> green)
Erase	erase tile(s)
Renumber	renumber tile (red -> green)
Map	leave window (does not really go back to Map Window...)
Undelete	undelete the last tile erased or copied over
Select	select tile (foreground=left / background=right)

   TILE EDITING WINDOW

yellow arrows: select foreground tile (tile to be edited)
               (single arrows +1 or -1, double arrows +0x10 or -0x10)
red arrows: shift tile definition

click on 16x16 grid: NORMAL draw with foreground(L)/background(R) color
                         SHIFT   select foreground(L)/background(R) color
                         CTRL   shade toward foreground/background color
                         ALT   copy pixels from background tile

click on foreground tile (yellow box): go to Tileset Window

click on gray box: undo last change made to current tile

click on palette: select foreground(L)/background(R) color

   TILE FLAG WINDOW

yellow arrows: select foreground tile (tile to be edited)
               (single arrows +1 or -1, double arrows +0x10 or -0x10)

click on foreground tile (yellow box): exit Tile Flag Window

click on white flags (0/1): edit Tile Flags
    NESW: directional flags
    Light: lighting level (0-3)
    Opaque: tile cannot be seen through (for LOS)
    Window: opaque unless player is standing next to window (for LOS)
    Foreground: always drawn on top of other objects
    NoShootThru: blocks missiles
    Double: this object is drawn with two tiles (x and x-1).
          Double tiles can be horizontal <- or vertical ↑.
          'X': not a double tile.
          Typical use: doors.

click on purple flags (0/1): edit Type Classifications
    New Type: this is the first object of a given object type.
              When clicked on, asks for the name of the type.
    Container: this object type is a container.

click on name/weight: edit name/weight data for current object type

   CHUNK WINDOW

click in upper left square: set view tile for that chunk

click in chunk: put terrain tile into chunk

<-Chunk->   Select chunk to be edited
<-Find->   Find chunk on map, and Goto that location.

click on "T=xx":   enter full-screen tileset window
click on map coordinates (xxx,xxx): enter map window

R: recover chunk from a temporary file in the art\temp directory.

    OBJECT WINDOW

Sched: go to the NPC Schedule Window.

Num: xxx   click on 3-digit number to change NPC's position in the list
            (inserts the NPC in the new position.)

arrows next to "Num:" go through the object list in order.
vertical arrows: edit objects lower/higher in the list.
horizontal arrows next to inventory: scroll inventory list left/right.

click in inventory: NORMAL Add inventory item or put in container.
                    ALT   Extract inventory item.

XYZ/EQU/INV/CON: switch item from Inventory to Equipped (and vice versa).

other: edit data ("---" indicates data not available)
    OWNE   Object is owned by NPC #quan.
    INVI   Invisible object (no tile drawn unless player control)
    BROK   Object is broken.
    BLES   Object is blessed.
    CURS   Object is cursed.
    LIT   Object is lit.
    BERS   NPC is berserk.
    PARA   NPC is paralyzed.
    ASLE   NPC is asleep.
    POIS   NPC is poisoned.
    DEAD   NPC is dead.
    CONT   NPC is under player control (name appears in yellow).
    ATKMON NPC will attack monsters if under computer control.
    ATKPLR NPC will attack players if under computer control.
    S   Strength (3-18)
    D   Dexterity (3-18)
    I   Intelligence (3-18)
    SE   Strength Experience
    DE   Dexterity Experience
    IE   Intelligence Experience
    HP   Maximum Hit Points
    Qual   Quality of item (key/door number, spell type, or
                upper byte of 16-bit Amount).
    Quan   Quantity of item (0-255), or NPC number of object's owner.
    Amt   16-bit Amount: combination of Qual and Quan.

Click on name (yellow=PC, purple=NPC): change NPC name.

FLOAT: move object to the top of the list.
EXIT: exit. Shift-clicking on EXIT will move the map to the location of
        the new object.

    NPC SCHEDULE WINDOW

    Keyboard commands (others disabled):

Day	Time	Action	Map location
u (1): Sunday	0-23	STAND	(x,y,z) (in hex)
(2): Monday	1A-12A	SIT	
u (3): Tuesday	1P-12P	SLEEP	
(4): Wednesday		WORK	
h (5): Thursday		WANDER	
(6): Friday			
a (7): Saturday			
(0): all (every day)			

: goto
: klimb
: view mode
sc: return to map editor.

If first character typed is G, K, or V, execute that command. Otherwise,
get a line of input and analyze it into day, time, action, and map).

    Mouse commands:

rrows: scroll schedule up/down.
lick: select node to be edited.
lt-click: delete node
lick on map: set map location (x,y,z).
: return to map editor.

ossible changes/bugs/comments:

    Ctrl-V is now redundant. It may go away any day now. Clicking on map in
iew mode may be another way to do this??
    Shift-click does not consistently "select" something. It should.
    The 'O' command to edit chunks is illogical.
    Animating water wheels, etc. need to be supported.
    Needs to be a way to change NPC number or somehow integrate it with the
alk Data.
    Not all NPC flags & Object Classifications are yet accessible.
    Need more double arrows.
    All scrolling arrows should be the same color (blue-green or whatever).
he yellow arrows should only be for selecting foreground tiles.

    BUG: If you try to delete an object that somehow contains an NPC (which
hould never happen anyway), the program crashes.

    Other notes?