Mission generator

(from Fresh and Buggy Dan)

To enter the editor, you have to press a hidden button in the "window" of the letter "A" (in the English-language version) or immediately above the first letter "и" (in the Russian-language version of the title).

Generator (G)

Work is best started in the generator, with which the landscape of the future map can be generated by combination of different layers in the area of the generator mini-map.

All elevation is created with layers:
- **Plato**
- **Small hills**
- **Old hills**
- **High mountains**
- **Chasm**
- **Smoothing area**
- **Water**

- Adjustment of brush radius (open +Maps->PenRadius), right-click to erase a layer.
- Overlay of racial layers ("Neutral" recommended to be placed on the play areas in order to not gain racial bonuses from race grounds). Racial layers are at the end of the list of layers. They can be applied directly while working in the editor, not in the generator, using the racist [R].

The Racist is the instrument that is brought up with the [R] hotkey, and allows one to quickly color territory into racial textures (Druid, Undead, Snow, etc.), having nothing in common with racism except the name. (switch races with numbers 1,2,3,4,5...)

It is necessary to specify the size of the generated area. The maximum size of a map is Max=16384. Area for the map will be allocated according to the specified size.

checkmarks:

DontGenerateLandscape - *will create only colors during generation, and will save current layers with the current rules.*

ReCreateMinimap - *recreates the mini-map.*

DoNothing - *allows you to adjust layers in the generator without changing anything else.*

DontGenerateTrees - *leaves only those trees that are already on the map.*

Landscaping work in the editor:

Ctrl+T - tools panel.

Tools:

- **Deform mode** [D] - deformation (Left Click, Right Click, Ctrl+Right Click) - allows you to create mountains and oceans by manually raising or lowering terrain.

    [Ctrl+X] refreshes elevation and blocks (to always be used after changing the landscape or blocks, before saving the map)

- **Smooth mode** [S] - - smoothes elevation, relief.
- **Subdivision** - (Smooth mode, [Ctrl]+Left Click) - allows you to subdivide surface triangles into smaller ones.
- **Simplify** - (Smooth mode, [Shift]+Left Click) simplifies and joins triangles.
- **Scrolling** - adjusts brush size.
- **Facturing** [F] - (hold Space, point the cursor at a facture, click it, release Space. Scrolling changes brush radius, Left Click applies the facture, Right Click on the ground picks up the facture under the cursor)
- **Eraser** [N] - erases objects (trees, rocks, mines) placed onto the map.
- **Colorize** [C] - coloring (hold Space, choose the color you need, release Space).
    - Scrolling changes brush radius.
    - LeftClick applies the color.
    - [Ctrl]+RightClick on the ground to get the color under the cursor.
    - RightClick blurs borders between colors.
- **Refresh Direct Illumination** [X] - hotkey (Commands->Refresh Direct Illumination - recalculation of additional lighting from the landscape.
- **Stones, Mines** (F4->#M_DR) (rocks in the section #3d_stones_large)
- **Trees** - editor panel for tree editing [F8]
    - choose trees (in the right panel)
    - [Tab] - preview
    - [Ctrl]+Scroll- radius
    - [Shift]+Scroll- scaling
    - [Ctrl]+Select trees - add to the selected (in the right panel).
    - [Ctrl]+DoubleClick - add all trees in the window to the selected.
    - LeftClick - place the chosen trees randomly on the ground.
    - [Ctrl+0] - remove the selected trees.
- **Blocking** - changes areas where one can or cannot pass. After the operation is started, it should be finished by pressing [Ctrl+X].
- **Roads** - set (LeftClick), remove (DoubleRightClick: first the road texture is removed, then the path "node")
- **Unit placement** [P] ([F9] clears the unit placement mode).
    - H (num pad) - all neutrals are given to the eighth nation.

[Alt]+Scroll - angle
Race ground layer [R] - allows you to apply race layers directly within the editor.
- **Landscape layer** [L] - allows you to apply landscape layers directly within the editor.

Now that we are done with landscape settings we can get to map settings:
Start the editor [Ctrl+E]
The map settings are there [P]

Map settings [P]:
It is necessary to set the following parameters when creating a map:
Randomize player position
Max players - limits the number of players on the map.
Victory rule: VC_basefantasy - victory and defeat rules for the map.
LimitcamArgs - limits the area over which the camera is allowed to move.

After finishing all the operations with the landscape, the map should be simplified:
Map simplification: from the Windows command line type "engine.exe /surf". In the program menu select the file of the initial map (INPUT) and the simplified map (OUTPUT), then press **START** with the operation (SIMPLIFY) chosen.

Editor hotkeys:

Common:
Ctrl+E - editor menu
Ctrl+I - information about the selected unit or building
C - texturing (hold space - choose texture, 16 million colors)
F - facturing (hold space - choose facture, X,Z,A,S - displacement, adjustment of the facture angle and size)
Ctrl+X - level the block, recalculate elevation
Ctrl+Shift+F5 - blocking mode
Ctrl+T and **Ctrl+O** - instruments panel on/off
P - nation and unit panel (1-7 chooses the nation)
F12 - game menu
R - race (fantasy only)
Ctrl+E, B - open the battle editor menu
Ctrl+Del - destroy a building or kill a unit
Ctrl+A - select all units of a type
Ctrl+B - select all buildings of a type

Camera:
Insert/Delete - bring the camera closer or further away
PageUp - restore the camera position at the bottom

PageDown - camera at the bottom
Home - restore the camera position
Mouse Wheel - rotate the camera
Ctrl+Shift+F7 - first-person mode

Boolean operations:
B - load the result of a boolean operation.
Wheel+(Z,X,C) - rotate an object.
Shift+Wheel - adjust object height.
Alt+(Z,X,C)+Wheel - adjust object size in the given direction.
RightClick - add the result of a boolean operation to the landscape.
After addition the seam with the landscape should be smoothed.
LeftClick - undo addition of the result of a boolean operation to the landscape.
X - Commands->Undo - remove the last result of a boolean operation from the landscape.
X - Tools->scissors - cut parts of objects out.
You should pay close attention to make sure there are no holes in surfaces after working with boolean objects and scissors.

Cheats:
Erase - remove an object
Deposits - add resources
Immortal 1 - become invincible
Sklad 1 - turn a building into a warehouse
3in1 - open the map, add resources.
Lego - open the "Lego" editor (mission scripts)
EdTree - open the tree generator

Script editing:

To bring up the script editor, type in the command "Lego" (without quotation marks). That will open this window:
Buttons:
SCRIPT - opens the main script editor window (the global variables window can be accessed from there).
GROUP - opens the group editor window (creation, removal, assignment, clear)
NODES - work with "nodes" (radial zones)
NODES ARR - node array editor
The button "SUB FUNCTIONS" is not functional and not used in work.
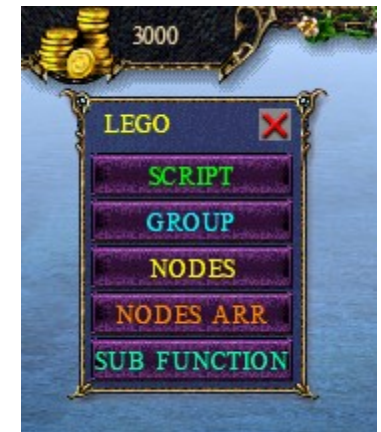
The script editor window.

The button **TXT/SRC** switches the script visualization mode. Editing can be done in the SRC mode, while search can be done in TXT mode. It is recommend to set the bug-checkmark "Auto Update" and press the button **UPDATE** in the TXT mode. For search it is necessary to click the field OVER the script twice, type in the string to search for (not case-sensitive!!!!) and press the button with the green arrow.

Also, the script can be saved in a file and loaded from a file. For this purpose there is a field UNDER the script area. The button with the arrow calls out a dialog for choosing the file (which can also be typed in manually), the button **L** loads the specified file, **S** - saves into the specified file. It should be noted that the whole script, all variables and functions are saved, so after loading the map should be saved and loaded. Otherwise, the parametrized functions of type "LUA" will not be displayed.

One more thing: files are best saved within the game folder (otherwise, they might not even get saved sometimes).
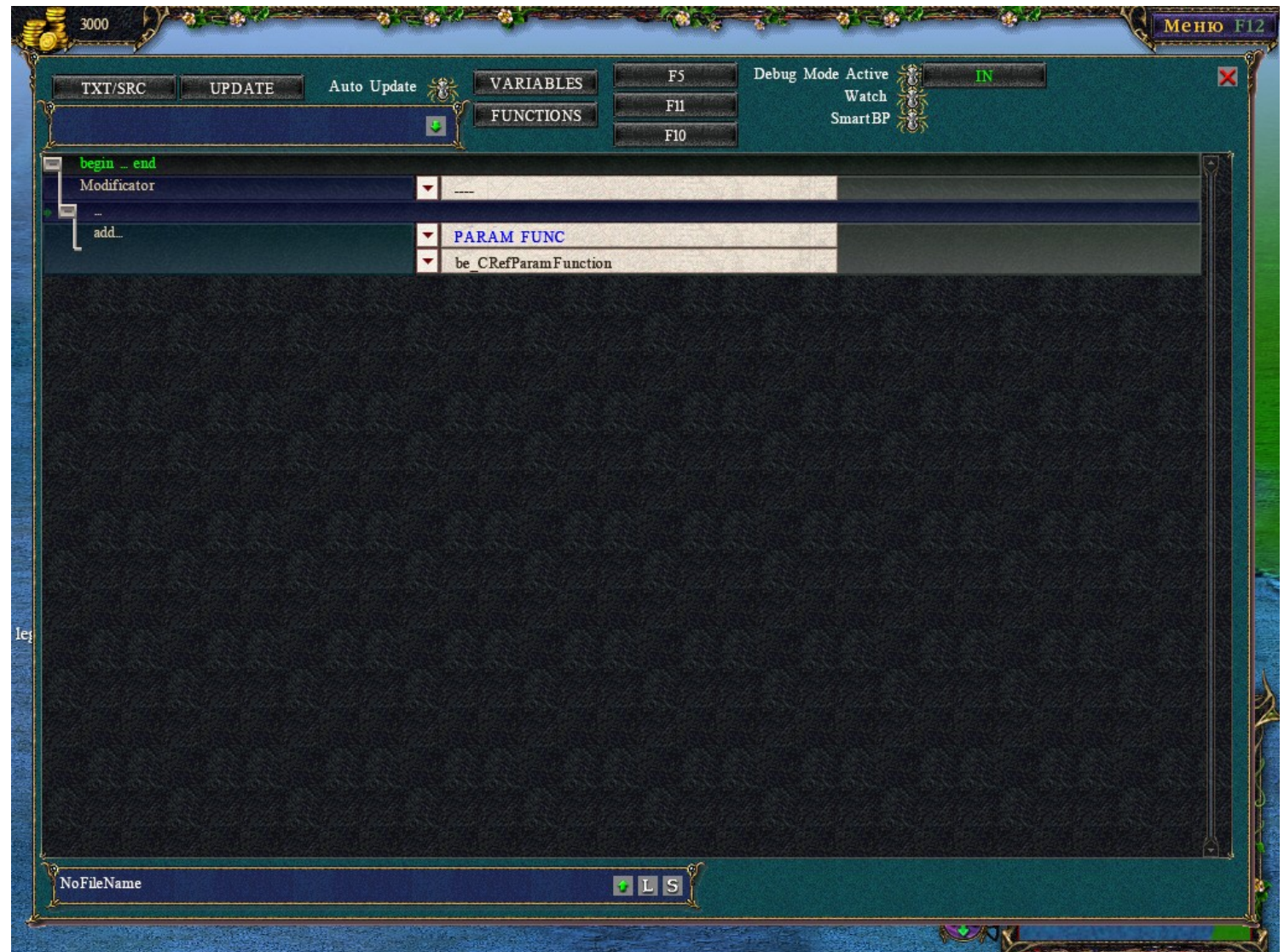
Script editor commands:

The button **VARIABLES** shows the list of global variables (there is also the lists of groups, nodes, dialog texts, subfunctions)
FUNCTIONS - list of all parameteric functions. The executable part of the section, marked as "LUA" is located in BattleEditor.dll, in the section "MODULE" you can add your own parametric functions, always documenting their actions.

When you are making your own script you should remember that all actions (commands) and functions (returning values) are divided into groups (upper drop-down list):
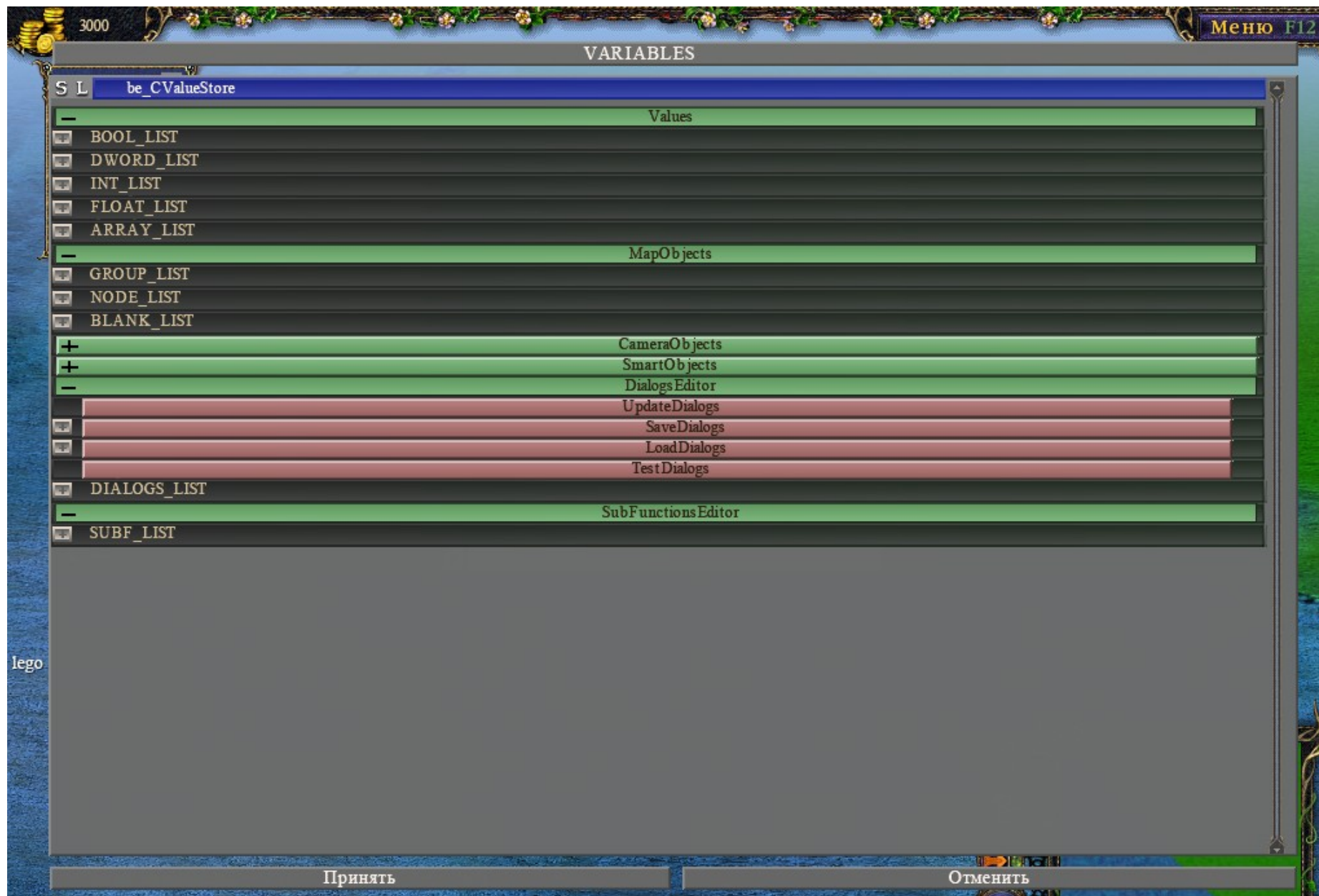
- execution of parametric functions
- used for comment insertion
- basic functions (checks, loops)
- command set for groups
- command set for global variables
- command set for nations
- system commands (settings timers, map cropping)
- work with sound
- commands for transports
- camera control
- (Cossacks 2 commands)
- (Cossacks 2 commands)
- special-purpose commands
- commands that are, unfortunately, not functional
- functions for groups
- functions for global variables
- functions for nations
- system functions
- functions for work with graphics
- functions for work with sound
- functions for transport
- special-purpose functions

PARAM FUNC
BASE FUNC
BASE COMPLEX
GROUP
GLOBAL_VALUE
NATION
SYSTEM
SOUND
TRANSPORT
CAMERA
MOVIE
COSSAKSII
SPECIAL
ABILITY
F_GROUP
F_GLOBAL_VALUE
F_NATION
F_SYSTEM
F_GRAPHIC
F_SOUND
F_TRANSPORT
F_SPECIAL

Since all script commands attempt to execute at each "tick", some natural rules have to be followed:

- try to to enclose all commands in checks that clearly define pre-conditions for execution.
- one of the commands should change the condition so that it does not execute at the next tick.
- there should not be "cyclic checks" (check 1 leads to check 2, ... which leads to check 1...) Everything should be simple and clear!

VARIABLES

S L be_CValueStore

— Values

BOOL_LIST
DWORD_LIST
INT_LIST
FLOAT_LIST
ARRAY_LIST

— MapObjects

GROUP_LIST
NODE_LIST
BLANK_LIST

+ CameraObjects
+ SmartObjects
— DialogsEditor

UpdateDialogs
SaveDialogs
LoadDialogs
TestDialogs

DIALOGS_LIST

— SubFunctionsEditor

SUBF_LIST

lego

Принять | Отменить

Variables editor:

Values section:
In the course of scripting the most used variables have types BOOL (triggers), INT and ARRAY.
ARRAYs can contain simple variables, as well as groups, nodes and unit types (for specification of automatic building).

Objects section:
The lists of groups and nodes are stored here. You can add new ones and remove the already existing ones, but you cannot group units in this dialog.

Dialogues section:
The phrase elements are set here. One element is one "balloon". These elements are grouped into dialogues with variables of type ARRAY. Each element contains: the name of the element, group, speaker, identifier of the speaker (name), the look of the speaker, emotion, audio file, text.
If the written text exceeds the allotted limit, the element will be colored red after you collapse it.

Subfunctions section:
Here commands that are run parallel to the script are described. These have been developed for description of skirmish settlements. The scripting principles are identical to the main ones (there should be no infinite loops...). Local variables used in subfunctions are set in the upper part, while the function itself is in the lower part. All subfunctions, like the scripting elements, are called at each tick, so all actions should be enclosed in clear check blocks.

Work with groups:

Options:
ADV - opens/closes the list of all groups.
Visible - closes and opens all groups (might not work).
Force Draw - draws lines for groups that are far away from each other (without this feature, groups outside the screen are hidden).
Auto Index - automatically adds "_<Last Index>" to the name of the new group.

Buttons:
Rem Selected - removes the selected units from the selected group.
On Screen - (or single click on the group name) moves the screen to that group.
Clear - clears the group.

To add units to the group, select the units you need, in the group editor select the one to which you want to add the units, and press **Add Selected**. If there is no free group, set the group name in the bottom part of the editor while selecting units, and press **New Group** - all the selected units will be added to the new group.

0   14/1000   999999   999999   999999   999999

Group Editor   ADV

Visible   Force Draw

Name: NONAME

Auto Index   Last Index: 0

New Group   Generate Name

NAME: g_g002

Add Selected   Rem Selected

On Screen   Clear

Select Group Us| Add selected units to Group (Ctrl+A)

Group Name	V	D
g_g001		
g_g002		
g_g003		
g_g004		
g_g005		
g_g006		
g_g007		
g_g008		
g_g009		
g_g010		
g_g011		
g_g012		
g_g013		

UPDATE   Visibility

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Work with nodes:

ADV, **Visible** and **Force Draw** work the same way as in groups.

To create a new node, you should specify the name, turn the "bug" **Add** on, and click on the proper place on the map.

Repeated clicks, with auto-indexing on, put nodes in the new specified points, while creating others with the same names, so pay attention to uniqueness of names!

It is not necessary to specify radius when creating nodes (especially if this is the "exit point").

When **Move** is on, nodes can be moved from place to place. For this click a node once (grab) and put it into a new place by clicking a second time (put).

When **Sel** is on, parameters of the selected node can be edited manually in the bottom part of the editor, where:

SegFR - shows the node segment (1..255, 0).

Dir - the initial vector direction.

X, Y, R - coordinates and radius.