Guide to using X3 Map Surgeon

A Step-by-step overview

1. Develop your new map layout using RemapSchemaEditor

The Excel spreadsheet RemapSchemaEditor is the primary tool you will use to plan out your new galaxy map. All changes you make to the spreadsheet are on the Master worksheet, shown in Figure 1. This spreadsheet consists 8 sections of interest:

- 1. ReadText IDs (Do Not Change)
- 2. Sector Name
- 3. Remap Action
- 4. Sector Coordinates (Original and Remap)
- 5. Gates
- 6. Gate Targets
- 7. Transfer Sector Jobs to New Sector? (Y/N, New Coordinates)
- 8. ReadText Sector Names and Descriptions

ReadText IDs: These are auto-calculated based on the Remap Sector Coordinates. You do not make any changes to these values.

Sector Name: These are the sector names in readable format, which may differe from how they must be formatted in the generated ReadText file.

Action: Flag indicating what action is to be taken for each sector:

- -1 : Delete
- 0 : Keep / Reassign to new coordinates
- 1 : Add new to map

Sector Coordinates: The original sector coordinates and new coordinates. (-1 represents N/A, when sector coordinates don't make sense.)

Gates: Flag for each possible gate in a sector, N, S, W, and E. 0 means no sector to be placed in this position, 1 indicates a sector is to be placed.

Gate Targets: For each gate position, list the target sector the gate will be linked to. Most gates connect to contiguous neighbors, but this section allows sectors to be linked to distant sectors across the map. Certain rules are maintained:

- Gates always connect to gates in corresponding cardinal directions; N to S, S to N, W to E, etc.
- Only one gate can be connected to any other gate.
- If a gate targets a sector, there must be a gate in the correct position that receives that connection and connects back to the first gate.

Transfer Jobs: Normally, during the remap procedure, Jobs assigned to specific home sectors are reassigned to the new sector coordinates in the remap. In some situations you may need to transfer the Job to a new sector rather than let the automatic reassignment occur. Usually, this is because a Job is assigned to a sector that will be removed and replaced by a new sector. These fields allow you to flag the jobs assigned to this sector to be transferred to that new sector coordinate even if this sector is flagged for deletion.

ReadText Sector Names and Descriptions: These are the actual values used in generating the new ReadText file.

	. B	C [E	F G	Н	IJ	K L	. M	N	0 1	PQ	R	5	TL	J V	W	XY	ZA	A A	B A/C	
,	1	2	3	Origi	nal 4	1 Rema		Gates				Gate Targets					Transfer Job			8	
2	TextiD Nat TextiD De	Sector Name	Action		Y	×		N	5			N		5		w I	E		N X		ReadText Sector Name ReadText Sector Description
3	0 0	Guiding Star	-1	14	4	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1		-1	1 -1	{7,1023000} {19,1033005}
4	0 0	Jupiter 3	-1	10	11	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 4	1 -1	-1	-1 -1	1	1 15	5 18	(7,1021213) (1951,34011) Massive by even Terran standards, Jupiter's ma
5	0 0	Jupiter 2	-1	11	11	-1	-1	-1	-1	4 .	1	-1	-1 -	1 4	1 -1	-1	-1 -1	1	1/	4 18	(7,1021213) (1951,34011) Massive by even Terran standards, Jupiter's ma
6	0 0	Saturn 3	-1	10	12	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1	1	1 1	5 17	(7,1021313) (1951,34011) To fly across the rings of Saturn, to know its be
7	0 0	Saturn 2	-1	11	12	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1	1	1/	4 17	(7,1021313) (1951,34011) To fly across the rings of Saturn, to know its be
8	0 0	Titan	-1	13	12	-1	-1	-1	-1	4 .	1	-1	-1	1 3	1 -1	-1	-1 -1	1	1/	4 19	Titan Within the cold dark seas of Titan, many see th
9	0 0	Uranus 2	-1	14	13	-1	-1	-1	-1	4 .	1	-1	-1 -	2 3	1 -1	-1	-1 -1	1	1	1 14	(7,1021414) (1951,34011. Without feature or feeling, Uranus stands torn
10	0 0	Uranus 3	-1	15	13	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1	1	1 1	5 19	(7,1021414) (1951,34011) Without feature or feeling, Uranus stands torn
11	0 0	Terran A	-1	13	14	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1	1	1	9	{1000,118} {9,500} Though this sector is known to be within USC of
12	0 0	Terran D	-1	11	15	-1	-1	-1	-1	-1 -	1	-1	-1 -	4 3	1 -1	-1	-1 -1	1	1	10	{1000,118} {9,503} Though this sector is known to be within USC of
13	0 0	Terran C	-1	12	15	-1	-1	-1	-1	4 .	1	-1	41 -	4 4	1 -1	-1	-1 -1	1	. 2	10	(1000,118) (9,502) Though this sector is known to be within USC of
14	0 0	Terran B	-1	13	15	-1	-1	-1	-1	-1 -	1	-1	-1 -	1 -	1 -1	-1	-1 -1	1	. 2	9	{1000,118} {9,501} Though this sector is known to be within USC of
15	1020101 1030101	Kho's Vengeance	1	-1	-1	0	0	0	1	0	1	-1	-1	0 1	-1	-1	1 0	0) -1	1 -1	Kho's Vengeance Kho's Vengeance
16	1020102 1030102	Brennan's Memorial	1	-1	-1	1	0	0	1	1 (0	-1	-1	1 1	0	0	-1 -1	. 0	1 -1	1 -1	Brennan's Memorial Brennan's Memorial
17	1020117 1030117	Duke's Retreat	1	-1	-1	16	0	0	1	0	1	-1	-1 1	16 1	-1	-1	17 0	0) -:	1 -1	Duke's Retreat Duke's Retreat
18	1020118 1030118	Fire of Redemption	1	-1	-1	17	0	0	1	1 (0	-1	-1 1	17 1	16	0	-1 -1		- 1	1 -1	Fire of Redemption Fire of Redemption
9	1020121 1030121	Unknown Sector Omega	0	20	0	20	0	0	0	0	1	-1	-1	1 -	1 -1	-1	21 0	0	-1	1 -1	{7,1020000} {12,123} {7,1020000} {12,123}
0	1020122 1030122	Tokyo Lambda	0	21	0	21	0	0	1	1 (0	-1	-1 2	21 1	20	0	-1 -1	. 0	-1	1 -1	{17,10821} {12,110} {17,10821} {12,110}
1	1020201 1030201	Arcturus Prime	1	-1	-1	0	1	1	1	0	1	0	0	0 2	-1	-1	1 1	0) -:	1 -1	Arcturus Prime Arcturus Prime
2	1020202 1030202	Eye of Colossus	1	-1	-1	1	1	1	1	1 (0	1	0	1 2	0	1	-1 -1		- 1	1 -1	Eye of Colossus Eye of Colossus
3	1020217 1030217	Consecrated Fire	0	9	15	16	1	1	1	0	1	16	0 1	16 2	-1	-1	17 1	0	-1	1 -1	Consecrated Fire The fire pits of the planet of XaarXen were dee
4	1020218 1030218	Heaven's Assertion	0	10	15	17	1	1	0	1 (0	17	0 .	1 4	1 16	1	-1 -1		1 -1	1 -1	Heaven's Assertion The Priest Xaar ordained this sector in clear un
25	1020222 1030222	Gannet Kappa	0	21	1	21	1	1	0	0	1	21	0 .	2 3	1 -1	-1	22 1	0) -:	1 -1	(17,10531) (12,109) (17,10531) (12,109)
6	1020223 1030223	Ares lota	0	22	1	22	1	0	1	1 (0	-1	-1 2	22 2	21	1	-1 -1	0	-1	1 -1	{17,10431} {12,108} {17,10431} {12,108}
7	1020301 1030301	Starkiller's Clan	1	-1	-1	0	2	1	1	0	0	0	1	0 3	-1	-1	-1 -1		-1	1 -1	Starkiller's Clan Starkiller's Clan
8	1020302 1030302	Pilgrim's Relay	1	-1	-1	1	2	1	1	0	0	1	1	1 3	-1	-1	-1 -1	. 0	-1	1 -1	Pilgrim's Relay Pilgrim's Relay
9	1020303 1030303	Kuiper Belt	0	17	12	2	2	0	0	0	1	-1	-1 -	4 3	1 -1	-1	3 2	0) -:	-1	Kuiper Belt Buried amongst the desolate streams of rock ti
0	1020304 1030304	Pluto	0	16	13	3	2	0	1	1	1	-1	-1	3 3	1 2	2	4 2	0) -:	1 -1	Pluto In Pluto lie the beginnings of the Kulper Belt. O
1	1020305 1030305	Neptune	0	16	12	4	2	0	0	1	1	-1	-1 -	1 -	1 3	2	5 2	0) -1	1 -1	Neptune Known by many as Soi's Eye, Neptune's stunning
2	1020306 1030306	Uranus	0	13	13	5	2	0	0	1	1	-1	-1 -	1 3	1 4	2	6 2	0	1 -1	1 -1	Uranus Without feature or feeling, Uranus stands torn
3	1020307 1030307	Jupiter	0	12	11	6	2	0	1	1	1	-1	-1	6 3	5	2	7 2	0	-:	1 -1	Jupiter Massive by even Terran standards, Jupiter's ma
4	1020308 1030308	Saturn	0	12	12	7	2	0	1	1 (0	-1	-1	7 3	6	2	-1 -1	0	-1	1 -1	Saturn To fly across the rings of Saturn, to know its be
5	1020312 1030312	Scion Fire	0	7	14	11	2	0	1	0	1	-1	-1 1	11 2	-1	-1	12 2	0	-1	1 -1	Scion Fire Low ranking Paranid priests established this se
6	1020313 1030313	Spring of Belief	0	8	14	12	2	0	0	1	1	-1	-1 -	1 4	1 11	2	13 2	0	-1	1 -1	Spring of Belief Spring of Belief was originally a Boron sector no
7	1020314 1030314	Perpetual Sin	0	12	14	13	2	0	1	1 (0	-1	-1 1	13 3	12	2	-1 -1	. 0	-:	1 -1	(7,30023) This sector, when discovered by the Paranid, w
8	1020315 1030315	Harmony	1	-1	-1	14	2	0	1	0	0	-1	-1 1	14 3	-1	-1	-1 -1	. 0	-1	1 -1	Harmony Harmony
9	1020317 1030317	Grand Exchange	0	19	7	16	2	1	1	0	1	16	1 1	16 3	-1	-1	17 2	0	-1	1 -1	Grand Exchange The Grand Exchange refers to the large skyscra
0	1020318 1030318	Tears of Greed	0	20	7	17	2	0	1	1	1	-1	-1 1	17 3	16	2	18 2	0	-1	1 -1	Tears of Greed The Teladi marked this sector as a hub for all or
1	1020319 1030319	Elena's Fortune	0	3	4	18	2	0	1	1	1	-1	-1 1	18 3	17	2	19 2	0	- 3	1 -1	Elena's Fortune Despite the impression of respectability afford
12	1020320 1030320	Cerberus Alpha	0	19	2	19	2	0	1	1 (0	-1	-1 1	19 8	18	2	-1 -1	0	-:	1 -1	{17,10131}{12,100} {17,10131}{12,100}
3	1020322 1030322		0	21	2	21	2	0	1	0	1	-1	-1 2	21 2	-1	-1	22 2	0	-1	1 -1	{17,10231} {12,106} {17,10231} {12,106}
14	1020323 1030323	Tiger Theta	0	22	2	22	2	1	0	1 (0	22	1 .	1 4	1 21	2	-1 -1	. 0	-1	1 -1	(17,10321) (12,107) (17,10321) (12,107)
15	1020401 1030401	Starkiller's Hideout	1	-1	-1	0	3	1	1	0 (0	0	2	0 4	-1	-1	-1 -1	. 0	-:	1 -1	Starkiller's Hideout Starkiller's Hideout
	144 - 1	Master export_schem	1 To 100	north Davids	20000	S / expo		adance	0.1	prepe		-]+]			_			_	

2. Save the Remap Schema Editor.

You only need to save the Excel spreadsheet itself. The Map Surgeon utilities directly access the data in the spreadsheet.

3. Use the X3 Galaxy Editor to create the new sectors

Map Surgeon cannot assist with designing and creating new sectors and their contents. At this time, you must continue to use the in-game Galaxy Editor to design and export these new sectors. However, Map Surgeon can make this process a little easier by rearranging the original sectors into your new map layout and exporting the map and support files into the game. Then by loading the new galaxy map in the Galaxy Editor, you only need to create the new sectors you wish to add, and connect their gates to the rest of the galaxy.

Once you have completed the design of your new galaxy map, export the map to disk. The *Map Surgeon* utilities will then help with generating the final schema files needed to speed up future map version updates.

4. Copy the exported reference map to mapsurgeon\input.

Use gen_newsectors.py and gen_gateschema.py to extract the new sectors and gates schema data into input\newsectors.xml and input\gate_schema.xml.

5. Generate new map and support files

Use $remap_cli.py$ to generate the redesigned galaxy map, $gen_jobs.py$ for the Jobs file, and $gen_readtext.py$ for the ReadText file. Once these files have been generated, you will need to load them into the game for validation—to make sure everything was converted correctly.

6. Generating a new objects\cut\00749.bod file

The 00749.bod file contains the animation data used by X3 to display the galaxy map in-game. Until you generate a new version of this file and restart your game, the in-game galaxy map will not display the sectors or gate connections correctly. Fortunately, Litcube has written a script that can generate the data for this file. It is included in Litcube's Universe and is available for vanilla X3 through the forums: Litcube's Flat Map Script.

In LU, the script is named "Z.Make00749Bod.xml", and in the standalone script package, "Lib.Debug.Make00749Bod.xml". Highlight the script in the in-game script editor, and press 'r' to run. Press 'Enter' twice to accept the default arguments and wait. If you have Subtitles enabled, you will see a progress report at the bottom of the screen. Once the export has completed, quit the game and browse to 'My Documents\Egosoft\X3AP' and locate the 8112.log file. Rename the log file to '00749.bod' and copy it to '\objects\cut'.

So long as your new map doesn't have any errors (like bad gate connections), the in-game galaxy map will now display your new map correctly.