Text Editing

Text Editing Without Any TBL Files:

This is hilariously easy. Some games will simply bare their scripts into decoded text the moment they're loaded in HxD. As a result, relocalized name patches, typo fix patches, and most importantly retranslation/restoration (or perhaps even, for example, French->English translation) patches of these games are simple enough for anyone reading this to make.

I'll use Demon's Crest for an example. The first line of dialogue in the game is the following:



Open Demon's Crest in HxD and search for "PROGRESS" using Text-string, not Hex-values.

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001F7270	43	4F	55	4E	54	45	52	21	00	4E	49	43	45	20	54	4F	COUNTER!.NICE TO

What can we observe from this? A few things. Most notably, HxD can be reliable for spotting the alphabet portions of a game's script. However, when looking at symbols such as the apostrophe when Alma says "I've" one might notice the symbols are messed up. It's perfectly possible to edit a game's script simply by replacing text here and making sure the amount of characters doesn't change. This can entail script trims and using spaces when necessary.

Of course, using the above method means you will have to manually keep track of things like 02 being a line breaker, or 5B being an apostrophe in the decoded script. Is there a way to make things easier? The answer is below.



Text Editing With TBL Files:

You don't technically need anything more than Notepad to make a TBL file, but to make life easier we'll use <u>Monkey-Moore</u> here. Download Monkey-Moore, open it up, and load Demon's Crest. Search for the word "PROGRESS" (using relative search, not value scan relative) and let's see what pops up.

Search Parameters				
 Relative search 	h 🔿 Value scan re	ative		
PROGRESS				
Enable Wildca	rds *			
Advanced				
Define charact	ter set:			
Results	d ann dia			
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0x1F7175	A=41 a=61	STROY#YOUR#PROGRESS#AND#I		
<u>C</u> reate Table	Clear List 🗙		Results:	1
Search Progress				
Flansed time: less	than one second.			

The word "PROGRESS" only shows up once in the game's script. Click on the result and press Create Table.

You can edit	the table values below before saving:	
Byte	Value	
41	A	
42	в	
43	С	
44	D	
45	E	
46	F	
47	G	
48	н	
49	I	
4A	1	
40	v	
Name dctext		
Format Thir	gy table file (*.tbl) 🗸 Encoding 🛛	Unicode (UTF-8) 🗸 🗸
e Table	Clear List 🔆 🕡	Results:
Progress		

Name your table file dctext.tbl, save it in the same folder as your ROM, and use the default format/encoding settings.

Before we move on, I want to spruce the TBL file up with symbols. Drag the TBL file into Notepad++ or any other program you use to write code, make a new line under Z, and start adding some symbols. We already know 02 is for line breaks, 20 is for spaces, and 5B is for apostrophes so for the purposes of this tutorial I'll just add those.

1	41=A
2	42=B
3	43=C
4	44=D
5	45=E
6	46=F
7	47=G
8	48=H
9	49=I
10	4A=J
11	4B=K
12	4C=L
13	4D=M
14	4E=N
15	4F=0
16	50=P
17	51=Q
18	52=R
19	53=S
20	54=T
21	55=U
22	56=V
23	57=W
24	58=X
25	59=Y
26	5A=Z
27	02=\
28	20=
29	5B='
30	

Save your TBL file, and now let's open up WindHex32. Press CTRL+O and open the Demon's Crest ROM first. Then click File->Open Table File->Table #1 and load dctext.tbl. CTRL+F and search for the word "PROGRESS" once more. Your screen should look like this.

001F70C0	80A94581852A8528A96CF0852EE230A9	El
001F70D0	532251BD80A90 Find: ASCII Text	×
001F70E0	0A22539B80AD8-Search Options	
001F70F0	22E39E80A9005 Enter Data: PROGRESS	Eind
001F7100	223DF880A6067	Select All Options on Form
001F7110	3829100CF04AE Save Finds in a Search List.	Remove All Options on Form
001F7120	80E230802B223	Eachie Incomparial Costal
001F7130	57F122499C802 Start Search From the Regining	Limit Search Results to 128 Finds
001F7140	22ED8B80B0062	Linit Search Hestilts to 120 Finas
001F7150	A902221DF8806BC220A50EC90106D002	.\k\
001F7160	64006B495B4C4C2044455354524F5920	d.kI'LL DESTROY
001F7170	$594{\tt F}55520250524{\tt F}475245535320414{\tt E}$	YOUR\PROGRESS AN
001F7180	4420495 B4D20474C4144025448415420	D I'M GLAD\THAT
001F7190	49205348414 C4C204245205448456A4F	I SHALL BE THEJO
001F71A0	4 E 4520544F2050555420414E20454E44	NE TO PUT AN END
001F71B0	20544F02594F55522050455454592043	TO\YOUR PETTY C
001F71C0	5255534144455D6A492042454C494556	RUSADE.jI BELIEV
001F71D0	4520594 F 552048415645024845415244	E YOU HAVE\HEARD
001F71E0	$\tt 204F46204D455D024920414D2041524D$	OF ME.\I AM ARM
001F71F0	415D6A492057494C4C20424502594F55	A.jI WILL BE\YOU
001F7200	5220455845435554494F4E4552210059	R EXECUTIONERY
001F7210	4F5520444F205345454D20544F20504F	OU DO SEEM TO PO
001F7220	53534553530254484520535452454E47	SSESS\THE STRENG
001F7230	54482050454F504C4502484156452042	TH PEOPLE\HAVE B
001F7240	45454E2054414C4B494E476A41424E55	EEN TALKINGjABOU
001F7250	545D0249204C4F4F4B20464F52574152	T. \I LOOK FORWAR
001 27260	4420E44E204EEEE2024E4EE8E4204E4E	THE MUTH ATTA OTH

You can now easily edit things like apostrophes! Simply highlight the portion of the decoded text you wish to edit, press TAB to toggle text editing mode, and overwrite the script while taking care not to overflow it with too many characters.

What makes Monkey-Moore so powerful is the fact it works on many games which will not normally display decoded text in HxD. For example, let's take an iconic quote from Turtles in Time.



If we search the word "bean" in HxD, nothing comes up. Yet, by searching "bean" in Monkey Moore we can find a relevant result. Repeat the steps above and suddenly, a large number of games can now have their scripts edited with ease. Monkey-Moore even works with Japanese fonts if you have the know-how.

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) Enable Wi	ildcards *				
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Create Table 00EC40 00EC50 00EC60 00EC70 00EC80 00EC90	Clear List 0400606F0800 8400C06F8800 20700400606F 607084008070 C0700401E06F C25014272832	606F0C008061 E06F8C00007 0800606F0C0 880080708C0 0801C06F0C0 1B2832FF012	Goto Offset File Position ECF0	EA.IA	Results: MA Value Form Hex-dec Decimal
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Tertiary fonts:

Mega Man X is another game which contains an easily edited script. At least, for the UI and dialogue. However, when it comes to the maverick screens a unique approach is needed. After all, they use a different and larger font than the rest of the game.

Let's revert Sting Chameleon's name to his original Japanese name, Sting Chameleao. Open Mega Man X (I'm using Rev 1/NA 1.1 although I'm not sure how much this matters) in MESEN-S and reach Sting Chameleon's screen. Then press ESC to pause the game while his name is on-screen, followed by CTRL+1 to open the tilemap viewer where the big font is visible in layer 3. You can use the password 1764 1788 8748 to skip the intro stage.



We only really need to find the LEON portion in the ROM. The top half has values of 3089 (L) 3084 (E) 308C (O) 308B (N) but we'll only need the last 2 digits of each in this case. Therefore 3089 3084 308C 308B becomes 89 84 8C 8B

The top half of A has a value of 3080 which is chopped down to 80. Of course, O as stated earlier goes from 308C to 8C.

We simply repeat this with the bottom half. 3099 (L) 3094 (E) 309C (O) 309B (N) is our second sequence. After the trimming 3099 3094 309C 309B becomes 99 94 9C 9B

The bottom half of A has a value of 3090 which means we simply use 90. Again, O starts as 309C but becomes 9C.

After opening HxD be sure to load your Mega Man X ROM, press CTRL+F, and use the Hex-values tab. Search your ROM for 89848C8B and 99949C9B. Make the following replacements.



Save your ROM, load it, and make sure your name restoration process was successful.



Adding New Characters:

One last thing is that you may want to add new characters. Some (if not most) games need a new English font if you want to translate from Japanese to English. Most games will require accent insertion to achieve a French translation. I will quickly showcase how this process works.

For this segment I opened Mortal Kombat 2 in YY-CHR, scrolled down to the font, and replaced a hardly used symbol (in this case, the question mark) with the French $\underline{\dot{u}}$.



Using the table method detailed above, you can add $\underline{\dot{u}}$ to a TBL file where the question mark used to be and see it in-game for yourself. I also replaced the A to demonstrate this.



One can also assign new characters in the ROM without replacing old ones, but this is often considerably more complicated and outside the scope of this tutorial. That said, if you want to

experiment yourself? Try using the empty spots apparent in the YY-CHR screenshot above and assigning characters with accents to them.