User's Guide
Chrono Cross
Translating Tools

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Contents

1   Introduction

1.1   History

The translation of Chrono Cross was initiated by Yazoo and Crono by Terminus Traduction. Due to misunderstandings, the project was split in two during the summer 2002. Yazoo forgot about the project for several months before working again in a different French team, while Crono stayed by Terminus.

At that time, I was already working on the Chrono Cross hacking on my own but had little knowledge of games compressions. I entered Terminus and worked on various projects and about October 2002, we restarted the project, with only the first source code files that Yazoo made public when quitting.

The translation restarted from scratch, and with others games in mind, I had not enough time for the hacking. Until July 2003, little programming had been done and the translation was very slow. I decided to spend an whole month "recreating" the sources, to avoid getting inspired by Yazoo's work. His work and research were fantastic on the game, but I found the code very specific, not recursive, and hard to upgrade or update.

Finally from September 2003 to June 2004, the translation speed increased and many modules were added to the program. This is just to explain why it took so long to get a patch, not specially because of complexity but because of implication from the staff. I'm also responsible for this and apologies for those who could have worked earlier. Also don't be surprised if you find other versions of French tools (maybe very different in form) with the same name at the origin of the project (Yazoo) since he carried on programming even if not with us.

So don't forget I'm not at the origin of the project and that it would have taken much more time if Yazoo had not been there at the beginning. Even if I am now fully able to do similar things from scratch even if much more complex, he is the one to thank for having started something that big in our team.

I just have 2 requests for the tools and the patch.

1. Don't erase my name or Yazoo's one from this tools, since we worked lots of hours on it, even if not in the same team at the same time.

2. Only distribute your future work as a patch, do not distribute the image file patched directly. If you are used to distribute iso files, I don't care,

but I really want to get people buy this extraordinary game, even if lots of them will just launch Emule to download it n I sometimes thing that companies are exaggerating on prices, but this game is worth his price.

2 Structure

You must have noticed that the Chrono Cross CDs have files visible on them. To read the files you just have to access a table placed at the beginning of the iso file.

Then when dumping files, that have recursive structures, you may be amazed by their number. Moreover, they don't have names. That's why it was necessary to implement a system of folders, and many tools to handle all this files (very various in forms).

2.1 Extensions

Here is a list of the extensions used by the tools and what sort of files they are associated with.

1. txt : List of files and descriptions of compressed files present in the 05_Infos folder

2. txt : Converted texts waiting to be translated, or reinserted

3. iso : CD Image files.

4. out : Files with no specific data in them (or not useful) directly dumped from the CD or extracted from files

5. tim : Standard PSX image files extension. The format is very specific and the tools offer conversions from BMP to TIM and TIM to BMP.

6. bmp : No comment

7. drp : One of the compact format on the CD. Files are just put one after an other to reduce the number of files without any compression. The name comes from the first 3 letters present in each file.

8. cpt : An other format very similar to drp (the name is just an abbreviation for ComPacT :)

9. coo : Specific format for coordinates of elements composing the menus. Arg... I will maybe distribute some useful tool to edit the menu when it will be finished (if you have any problem with them, I will give

explanations later). It is very hard to understand how it works exactly, with nothing to work on. But with little explanations, it's a piece of cake.

10. tbt : Texts with pointers at the beginning, they often contains more information. Some are directly written in ASCII, many are not and use various characters tables.

11. tcc : Specific format for classic tbl (table files) created for the occasion. More details on it in the table folder.

12. lzs : Lzss is the compression used for almost every script in Chrono Cross. Very effective and simple. The only one difficulty is to respect the initial constraints.

13. scn : Script texts after translation with the tables. Scn stands for scenario.

14. lst : List of modifications to include in the final patch. Some are automatically generated, but not all.

15. str : Standard video format for Playstation.

16. vid : Elements of the video files used for translation. Use MC32 (official free software from Sony) to convert files from Avi to Str, then rename to Vid so the tools can merge the files.

2.2   Tools folders

Even if not a final version of the tools, you should everything you need to modify the scripts, the pictures, the menus, the auto-accentuation system and many other things.

There is no source code included in this package just because of lack of time and they should be added soon. Therefore this compiled version can only be used under Windows.

2.2.1   00_Executables

This folder contains the executable, Chrono_Cross.exe and the batch files running the main program with script parameters. The use of the scripts will be detailed later.

If you need to decompress/compress files, extract files from the CD image or convert texts and pictures from one format to another, this is where the actions will be executed.

2.2.2   05_Infos

Certainly one of the most important folder, it handles all the parameters necessary to extract/compress/convert files.

In details, Dump.txt contains the names of the files present on the CD (just a description in fact, often written in French), their hidden extension. You can change eveything in this folder if needed but be careful with extensions since many modules will not work with yours.

Now read the description of the folders (if you want to of course ;) :

1. Brut : this folder contains addresses of data present in the executable (the file 0000 alias PSX-EXE.psx). This file is then transformed (uncompressed) by the program.

2. Coord : this folder contains the strict necessary to handle coordinates files for the menus. In fact the files were coordinates are and what each elements corresponds to. Be careful that the coordinates are often swapped in the original files, and it takes a long time to sort them :(I will give you the sorted files later, if you can wait until then.

3. Cpt : it describes the contents of every CPT file on the CD, they are sometimes recursive. Don't be surprised by the number of files, many of them were generated from a single one, for scripts for example, since they are all identical.

4. Drp : same thing for DRP files

5. Groupes : only used by scenario and fight scripts. It details how to regroup share/script files. In fact every single room linked to the main scenario of the fight dialogues contains a mini script. The tools use ???_Part.txt and ???_Rooms.txt to generate one single file for the scenario and one for the fight, with only the useful blocks. The size of the script drops from 4.5Mo to 1.6Mo with that, since rooms contain lot of debugging data (I still wonder why since they said they lacked place on the CD for the script...). Then the file can be shared by different translators by changing the ???_Repart.txt file. The structure of this file is the easiest to understand. I think you should rewrite this once you've dumped everything, since it must have changed since we worked with the full English script.

6. Txt : information on the tbt files with the table used and the type on pointers (16 or 32 bits)

2.2.3   10_Image_Avant and 11_Image_Apres

This folder is designed to contain the original CD image file and the translated CD image file. Of course the Avant folder is to be used for extraction and the Apres folder for reinsertion.

The image file names should be CC_CD1.iso for the original and CC_CD1_fr.iso for the other one (sorry this French touch should be removed soon). Only the tools should interact with these files.

2.2.4   20_Dump_Avant and 21_Dump_Apres

Even if the name is not well chosen for the second one, there will contain the files extracted from the images (about 3000 in each, knowing the CD includes about 5000 files). You should not handle these too. There are just there to avoid mix between edited files an "ready-to-reinsert" files.

2.2.5   30_Fichiers_Avant and 31_Fichiers_Apres

Files copied from the 20_Dump_Avant folder for the first one and files reconstructed for the second. This is were modifications are done. These folders contains tons of subfolders, respecting the CD organization. That means that the files compacted in the file 0009 are put in the folder D0009 and so on.

2.2.6   40_Textes_Avant and 41_Textes_Apres

Texts that are supposed to be translated or that have been translated. Each folder includes Distribution where the specific files for each translators are created. The blocks that should be translated for the characters selected start by a '$', the others by '-'.

In the "after folder", there is another subfolder named Retours, to suppress additional escape characters sequence often added when working with txt files under Windows. These files are generated automatically.

In each room, you will see what is called blocks, in fact representing every sentences said by one character in a row. These blocks look like this :

```
00000 (L:00208.H:00004)
+-------------------------
|Les Frères Boîteux:
|Alors, lequel d'entre
|nous choisissez-vous?
```

```
|Vous n'avez qu'un essai!\Ptr\
|
```

The header is composed of two parts, the first line :
index of the block
(L:width in pixel, calculated)
(H:height in lines of the screen, you can change it but the game generally limits the number to 4 except for very special events)
And the second line where the number of '-' is the width of the line in characters (the ones represented on the screen). The game seems to correct this automatically but it is best to be careful even if I tested it for hours.

2.2.7   42_Tables_Avant and 43_Tables_Apres

These are the standard tbl files (not used, just for debugging the tools and verifying the output hexadecimal files) and the tcc files (maybe initials for Table Chrono Cross :P).

Each line in these files except for those starting by a '/' that introduce comments, are of the following format (as described in the file Codes.txt, in French...) :
mn aabb=string
m = the number of byte to read
n = number of parameters (in bytes) to read after the code
aa = first hexadecimal character
bb = second one if m=2
\ stands for a new line character
Ptr stands for a change of pointer
For example :
"11 08=Perso" = Read one byte if it equals to 0x08, read another one 0x?? and write \Perso\\??\ in the text file.
"20 0800=Serge" = Read 2 bytes if they are 0x0800 put \Serge\. This rule is evaluated prior to the other one.

2.2.8   55_Ips

This folder should contain the IPS files but nothing automatic was implemented yet since few files need this algorithm to reduce the size of the patch.

2.2.9   60_Scripts

All the scripts in txt format necessary to extract, reinsert, convert or decompress the files are in this folder. Here is the list of the commands available :

```
Descriptions                         (paramètre(s))
01) Initialisation des dumps         ()
02) Dump de fichiers                 (numéros des Rooms à extraire)
03) Suppression de fichiers          (numéros des Rooms dumpées)
04) Ouverture de l'iso               ()
05) Fermeture de l'iso               ()
06) Dump des pointeurs de fichiers   ()
07) Dump de l'entete de l'iso        ()
08) Execution de script              (nom du fichier)
09) Réinsertion de fichiers          (numéros des Rooms)
10) Initialisation de la réinsertion()
11) Récup des pointeurs de fichiers  ()
12) Mode d'ouverture de l'iso        (lecture|écriture)
13) Conversion TIM->BMP              (fichier)
14) Conversion BMP->TIM              (fichier)
15) Décompression DRP                (dossier|fichiers)
16) Compression DRP                  (dossier|fichiers)
17) Copie de fichiers entrants       (fichiers)
18) Copie de fichiers sortants       (fichiers)
19) Dump de coordonnées graphiques   (dossier|fichier)
20) Réinsertion de coordonnées       (dossier|fichier)
21) Décompression CPT                (dossier|fichiers)
22) Compression CPT                  (dossier|fichiers)
23) Extraction de textes             (dossier|fichier)
24) Réinsertion de textes            (dossier|fichier)
25) Extraction de donnees brutes     (dossier|fichier)
26) Réinsertion de donnees brutes    (dossier|fichier)
27) Dump des Rooms                   ()
28) Copie entrante des Rooms         ()
29) Extraction des Rooms             ()
30) Décompressions Lzss du script    ()
31) Extraction du scénario           ()
32) Chargement des infos des Rooms   (fichier)
33) Regroupement des scripts         (fichier)
34) Séparation des scripts           (fichier)
35) Dump d'un texte de scénario      (dossier|fichier|table)
36) Réinsertion d'un "scénario"      (dossier|fichier|table)
37) Regroupement des descriptions    ()
38) Regroupement des accents         ()
39) Partage par personnages          (fichier)
40) Regroupement du script/persos    (fichier)
41) Informations de répartition      (fichier)
42) Reinsertion des Rooms            ()
43) Recompression Lzss des Rooms     ()
```

```
    44) Recompression Cpt des Rooms       ()
    45) Exécution d'un script             (script)
    46) Copie sortante des Rooms          ()
    47) Réinsertion des Rooms             ()
    48) Correction des retours de ligne   (fichier)
    49) Réinsertion des accents           ()
    50) Modif des pointeurs de fichiers   ()
    51) Suppression des Accents Auto      ()
    52) Insertion des Accents Auto        ()
    53) Génération des listing du patch   (fichier)
    54) Génération des listing persos     ()
    55) Compression Lzss                  (dossier|fichier)
    56) Décompression Lzss                (dossier|fichier)
    57) Insertion de video                (numero de room)
    58) Génération des fichiers patch     ()
    59) Conversion TIM sans palette BMP   (room|fichier|palette|masque)
    60) Conversion BMP TIM sans palette   (room|fichier|palette|masque)
```

```c
// Commandes
char *commandes[] = {
    "Dump_Init",        "Dump",            "Dump_Sup",      "Iso_Ouvre",
    "Iso_Ferme",        "Dump_Ptr",        "Dump_Entete",   "Script_Exec",
    "Rein",             "Rein_Init",       "Rein_Ptr",      "Iso_Mode",
    "Tim2Bmp",          "Bmp2Tim",         "Drp_D",         "Drp_C",
    "Copie_I",          "Copie_O",         "Coord_Rein",    "Coord_Dump",
    "Cpt_D",            "Cpt_C",           "Txt_Dump",      "Txt_Rein",
    "Brut_Dump",        "Brut_Rein",       "Rooms_Dump",    "Rooms_Copie_I",
    "Rooms_Cpt_D",      "Rooms_Lzss_D",    "Rooms_Extr",    "Rooms_Infos",
    "Part_Regroupe",    "Part_Partage",    "Scenar_Dump",   "Scenar_Rein",
    "Perso_Regroupe",   "Accent_Regroupe", "Repart_Partage","Repart_Regroupe",
    "Repart_Infos",     "Rooms_Rescn",     "Rooms_Lzss_C",  "Rooms_Cpt_C",
    "Script",           "Rooms_Copie_O",   "Rooms_Rein",    "Repart_Retours",
    "Accent_Partage",   "Rein_Ptr_M",      "AutoA_Suppr",   "AutoA_Ins",
    "Listing_Genere",   "Listing_Persos",  "Lzss_D",        "Lzss_C",
    "Perso_Partage",    "Str_Insert",      "Listing_Fichs","Raw2Bmp",
    "Bmp2Raw"
};
```

It is in french sorry, because directly copied from the source file in C. By trying to use them and see how they are written, you should easily learn how to use the tools. The format for files/folders is very special but you may cope with it. It is always possible to change if necessary, but this works pretty well.

Just be careful with the Informations and co functions, that must be called prior to use the effective functions : Repart_Infos then Repart_Partage or Repart_Regroupe.

If you need to try and test things, don't hesitate know that stopping an operation can have consequence on the files that are being written, but you will never damage the input iso file for example. Even some bad manipulation on the output files, can be corrected by simply rewriting them by correcting the script. It is a source of error, how many times I forgot that I had changed something in one of these files or corrupted a single file somewhere and thought that my code was wrong, spending hours on debugging, wondering why I had error messages on this particular file :(

Know that you can directly launch the Chrono_Cross.exe executable with no arguments and he will prompt you for orders. Good to test and get with the tools.

2.2.10   75_Patch

This is the files that are included in the french patch (for now) not everything is settled. For example the dump/reinsertion of the accents table is buggy because I changed something last week.

The Infos.lst file lists all the modifications necessary to apply the patch. The structure is interpreted by the end-user's program and include in the final patch.

2.2.11   78_Patch_Final_Jar

Folder that contains what the end-user should have, except for the txt file explaining what this patch lacks (as it is).

The "patcher" is written in Java, but some procedures to manipulate compressed files and to create the CD images were written in C/C++ (mandatory for SCSI direct through orders). Therefore you also have a DLL file in this folder. I will eventually give you the source code for it, when it will be complete, even if it is fully operational now.

3   How to translate

A very short chapter on what you should do if you want things to go fast without thinking too much on how it is done M

1. Start by creating the image file of the CD1 in the corresponding folder (with Patcheur.jar or an burning software that handles this format).

Be precise with the name, same thing with the second CD. In the tools given, in the CD2 folder, only the files that differs from a CD to the other are in the zip files (of course copy the other files from CD1 to CD2).

2. Launch the links to every Dump_??? you find. You can see what they do by looking for changes and opening the corresponding scripts in the 60_Scripts folder. I'm not mad, they have the same name ;)

3. Copy tons of files (almost everything) from 30_Fichiers_Avant to 31_Fichiers_Apres. It is not automatic because of possible deletion (it can be dramatic if complete rooms with coordinates for example)

4. Change the things you need (try to test step by step).

5. Launch the Rein_??? scripts to reinsert changes. Don't be surprised if there are errors. I just hope the French messages will not hurt you (there are often file names, something multilingual :).

6. When successful, launch the game in an emulator like ePSXe, with the option -noauto. Particularly with version 1.6 where the status menu still hangs up :/ Problem with the emulator not the patch, it is the same with the original. I use ePSXe 1.5.2 with an old Pete's OpenGL plugin version 1.5 and it runs fine. More recent versions of plugins I have seem to produce more and more bugs.

4   Conclusion

I hope this will help you to start, don't hesitate to ask questions, I will gladly participate if it makes another "foreign" version possible and allows tons of players to discover this wonderful game.

This little User's Guide lacks tons of elements, so don't be afraid to ask, I should always be there to answer, even if very busy these days... If you don't understand how to do something that was working fine in our version, sneak in the sources and compare your generated files with the ones given as example (and be careful with Unix/Windows/... choices for end of line character codes).

I'll not be able to participate directly, but you're free to change anything in the sources if you think it will improve them. I wish I could try patches in various languages in the next years. Good luck to anyone who wants to get into it.