

ACKNOWLEDGEMENTS

When using D4R, the paper by the authors published in the peer-reviewed journal should be cited as reference in any resulting publications and talks.

When using a certain localisation file, the authors and post-editors of each of the localisation file used should also be acknowledged, credited, or cited. We sincerely thank the authors and post-editors for assisting in this project.

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DISTRRAINT For Research (D4R) is licensed under the Creative Commons CC BY-NC-SA Licence. To view a copy of the licence, visit <https://creativecommons.org/licenses/by-nc-sa/4.0/>. All files necessary to run D4R can be downloaded from our repository.

The credits for each localisation file are included in the files. All credits of D4R proofreaders are included in the files.

Bitmap font used in D4R is Silver ©Poppy Works – <https://poppyworks.itch.io/silver>.

WHAT IS D4R?

DISTRRAINT for Research (D4R) is a resource for user-centred game translation studies and beyond. The resource – in the form of a browser video game – is openly available and customisable, and can be run in the browser by linking a direct URL to it. The game is a demo based on the commercial game DISTRRAINT: Deluxe Edition (Jesse Makkonen 2017), whose official distribution utilises fan-made localisations into many languages. To make D4R, that commercially-available indie game was ported into HTML5 by the creator of the original game as part of a collaboration with scholars. Researchers can easily modify in-game dialogue and UI texts to use D4R in their projects. All files and instructions necessary to make a working build are available under this repository.

HOW CAN I SETUP D4R?

The D4R game consists of the following components that all need to be hosted on a server and placed in the same root directory:

1. Data folders (just the directories "resources" and "src"): audiovisual assets, dependencies, scripts, programming runtime, etc.
2. HTML file (e.g. "english_release.html"): this file runs the game from a URL pointing directly to it (e.g. [https://\[domain\]/\[root-directory\]/english_release.html](https://[domain]/[root-directory]/english_release.html))
3. TXT file (e.g. "english_release.txt"): this file holds the game texts that the HTML file reads from to display in-game.

CAUTION: The filenames of the HTML and TXT files must be identical (like in the examples above), and all components must be in the same directory. That is because the HTML file looks up its own name and location to find a TXT file with the same properties. You may change the filename of the HTML/TXT pair to whatever you need, however (i.e. it does not need to be "english_release").

HOW CAN D4R BE USED IN RESEARCH?

You can setup more than one standalone instance of D4R, e.g. if you wish to deploy D4R in experimental studies. To illustrate: say you want to conduct a reception study to compare how the English texts in D4R compare against its texts localised into Basque. You may duplicate the HTML/TXT pair within the same directory and link a URL to the duplicated HTML file to generate a new instance of the D4R game that reads from the duplicate TXT file. You can also change its filename to something like "euskara1.txt", but you must change the HTML filename to "euskara1.html" as well. Into the TXT, you deploy your Basque localisation. You can base your localisations off of the official localisation files of the original game.

With the two separate URL links, pointing each to one of the two HTML files in the directory (e.g. "[domain]/d4r/english_release.html" and "[domain]/d4r/euskara1.html"), you can paste them into your HTML5 Internet Browser of choice. You can administer one or both such URLs to your study participants for them to play the game in either version as a stimulus material. As a post-task, you retrieve measurements of their reactions. You can utilise the D4R game somehow else in your research.

Please keep in mind that when given a URL like "[domain]/d4r/english_release.html", your participants might be tempted to simply change "english" to something else, and if you happen to have similarly named other releases in the server's directory, they might accidentally access other releases of D4R this way. You might want to mask them to an elaborate URL which makes sense to you and helps you manage the study, but would prompt the participants to try and change URL parameters (e.g. "[domain]/d4r/rqbErkRsbi1.html" for the English Release and "[domain]/d4r/rqbBrkRsbi1.html" for the Basque Release). Please remember to keep the TXT filenames matching the HTML filenames.

If you have any further questions, please contact the authors of the D4R citable paper:

Hejduk, K.W., Makkonen, J., Sawa, K., Deckert, M. (2026). *DISTRAINT for Research" (D4R) – a resource in game translation studies and beyond. Translation Spaces. John Benjamins.*

WHERE DO THE D4R TXTs COME FROM?

D4R comes with a suite of TXT localisation files. These have been auto-generated from the original game's localisations. It is important to note that the TXT files were auto-generated using an Excel formula script which extracted specific lines from the original game's localisations and substituted their old ID tags used by the original game to the new ID tag format used by D4R (numbers from 001= to 223= [224= is a dummy line, required to print the string 223= in-game]). Please note that ID tags 011= and 037=, 038=, 039= are unused.

D4R also uses a couple new dialogue lines that were not there in the original game. Some of them are new strings unique to D4R that do not appear in the original game (001=, 002=, 003=, 004=, 222=, 223=, 224=). They had to be machine-translated into each respective language, but most have been post-edited by experts. The credits for the authors of each localisation found in the original commercial game, as well as the post-editing experts, are provided atop the strings (ID 000=).

CAUTION: The TXT localisation files of D4R are based entirely on the localisation of the original game – most if not all of the localisations of the original game have been donated by volunteer fan translators to the original game's author. Therefore, researchers utilising D4R are advised to QA the TXTs themselves before deploying in any research.

CAUTION: As a result of post-editing with experts, the localisation were also proofread to be of highest possible quality *while also being as close to the official localisation file as possible*. The point of proofreading was thus to strike a balance between quality (functionally defined here as uninterrupted intended experience of the game in every language), and similarity to the official target texts of the original commercial game. This means that there are certain characteristic decisions of the original official fan-translations which are retained

in the D4R. Admittedly, the line between what was deemed acceptable and kept, and what was deemed unacceptable and fixed, was blurry when proofreading the localisation files. Generally, we decided to stay away from introducing semantic changes (therefore only correcting typographical errors, punctuation errors that would be obvious to target language users, and grammatical errors that would render the sentence difficult to understand for target language users). However, there were borderline cases where we saw potential to intervene in order to make localisations as similar to one another as possible, making the D4R more balanced as an inter-lingual research instrument. For instance, the Spanish localisation of the original game at the string [bosses]say7= translates "Happy to hear that, Sirs" into Spanish as Price remaining silent ("..."), probably as a way to show to the users that, narratively, Price is conflicted about his situation. Similarly, the Spanish localisation of the original game renders the string [opening]say2= from the English source text "... and I sold it." into Spanish as "y yo la vendí." without the initial ellipsis. These departures from the source text are not present in any other localisation file. Therefore in D4R, as an attempt to balance D4R's ecological validity through the use of the original game's assets (including localisations) and D4R's internal validity through offering each locale as highly comparable to one another, we changed the Spanish locale. In the Spanish target text of D4R, the line now reads: "200=Me alegra oír eso, señores" and appears in the Spanish locale of D4R. Whereas in line "048=" (target text used to read "y yo la vendí.") the initial ellipsis has been added (the target text now reads "...y yo la vendí."). The entire line reads "048= ...y yo la vendí." and appears in the Spanish locale of D4R.

CREATING AND ASSESSING D4R LOCALISATIONS

Should you want to create a new localisation or QA an existing D4R localisation txt, please first refer to the "D4R scheme of TXT IDs" CSV/XLSX file attached to the repository. There, you will find exactly which strings from the original game's localisation files are used by D4R with the new ID tag system (000= through 224=) and in what way they have been implemented in the D4R's localisation TXTs. The CSV/XLSX file are composed of four columns. Column A gives you the new ID tag system (000= through 224=). Column B gives you the corresponding ID tag from the system used in the original game and its original localisation files. However, some strings used by D4R are completely new or new but adapted from the original game's localisation files. Such categories are provided in Column C for each line of the sheet. For each corresponding line of the sheet, Column D gives you an explanation of how we have generated each line of the D4R localisation that you can ultimately find in the D4R localisation TXTs. If you author a new localisation file, and you wish for it to be used by other researchers, you can contact the authors of the D4R citable paper, so that we can add your localisation alongside the D4R-native localisations (that come from the official commercial game). Your name and affiliations will be credited at string 000= of the file.

TROUBLESHOOTING

You cannot run D4R just by double-clicking the HTML file after extracting the contents of the ZIP to a folder. You put D4R on a hosting server and generate a URL to the HTML, then paste the URL to your browser.

D4R needs Unix LF (U+000A) linebreaks as a line terminator in TXT files. If a new localisation you created and fed into D4R creates white blocks in the in-game texts, this may be a result of pasting an Excel-type column directly into a TXT. Try changing the linebreak characters from Windows-based CR-LF to Unix-based LF.

D4R has been tested to successfully display special characters printable by the game's bitmap font (Silver TTF by Poppy Works). D4R has not been tested to display all its special characters, but due to how it is coded to display text, it uses its own list of special characters to print them in-game. The "D4R Fontbank" TXT file attached to the repository can be accessed to view all printable special characters in-game. You can use this to see if your language is fully supported by D4R before committing to using this software.

If line 223= does not print in-game for you, make sure that the dummy line 224= is included in your TXT. If there are other issues, contact the authors of the D4R citable paper.