THE DIRECTORY STRUCTURE

» MAIN DIRECTORY `<../>` and folder contents:

📁 `<../IPA_chart_hist>`: HTML & CSS website files

   📁 `<../images>`: website images

   📁 `<../scripts>`: _website_ scripts

   📁 `<../webfonts>`: website fonts

📁 `<../IPA_chart_orig/>`: html & css website files

   📁 `<../[YEAR]/>` (e.g. 2020): final versions of PDFS

   📁 `<../images>`: SVG versions of English charts (full & parts); any website images

   📁 `<../pdfs>`: _website_ copies of PDFS

   📁 `<../scripts>`: _website_ scripts

📁 `<../IPA_chart_trans>`: HTML & CSS website files

   📁 `<../[YEAR]/>` (e.g. 2020): final versions of PDFS

   📁 `<../images>`: website images

   📁 `<../pdfs>`: _website_ copies of PDFS

   📁 `<../scripts>`: _website_ scripts

📁 `<../IPA_inter_chart>`: HTML & CSS website files

   📁 `<../images>`: website images

   📁 `<../manual>`: interactive chart website manual

   📁 `<../scripts>`: _website_ scripts

   📁 `<../sounds>`: website audio

   📁 `<../webfonts>`: website fonts

📁 `<../pdf/>`: base PDF files (non-dynamically created PDFS with individual components of charts, such as table lines, phonetic symbols, (CC) symbols; as well as manually created translation files (metatext only) of _non-Latin script_ languages), various configurations of which are merged to create the background for the English or translated metatext

   📁 `<../arrays/>`: predefined, text files with non-dynamically created arrays of data for the processing & output of PDFS, including info such as form field names, coordinates, font size, etc., i.e. everything necessary for putting together various types of charts

   📁 `<../copyright/>`: text files with predefined copyright info, including displayed file title, search keywords & description of fonts, authors & translators names etc.

   📁 `<../pdf_reports>`: not updated since at least 2016; files for _List of symbols and diacritics with descriptions & identifiers_ (English charts website)

   📁 `<../scripts>`: _Adobe Acrobat & Illustrator_ script backups

📁 `<../pdf_temp/>`: intermediate versions of PDFS (English & translated)

   📁 `<../eps>`: EPS versions of English charts (full & parts) – all form fields are converted into regular text, then fonts are converted into outlines – used as input files for Illustrator to produce SVG files

- 📁 **`<../txt>`**: text files with dynamically created arrays of data for the processing & output of PDFS; these files are created by Acrobat scripts and contain coordinates and metatext data (translated into various languages)

- 📁 **`<../pdf_trans/>`**: PDF forms files with translated metatext (i.e. original files sent by translators); PLEASE NOTE that these files have to be checked prior to processing by scripts – not everyone uses Adobe Acrobat or Reader for their translations and sometimes returned files don't have any form fields to process; also a small script must be run to split the "Simultaneous ∫ and x" string & field into individual components so as to position them correctly later on (see below under ***Get translations***)

» FOLDER PATHS are set for my machine, i.e. `var sPath = "h:/IPA/";` in both the Acrobat and the Illustrator scripts this should be replaced with the desired folder path; all file saves use the value of this variable to compose the complete path, so there's no other place where paths must be updated

THE DIRECTORY CONTENTS, sorted by script order

📂 **<../pdf_trans>**: original PDF forms files with translated metatext

📂 **<../pdf_temp/txt>**: text files created by function:

    Adobe Acrobat ⇨ Help ⇨ Get translations ⇨ LG: `GetTrans()`

📂 **<../pdf_temp>**: folder for pdf files created by functions:

    Adobe Acrobat ⇨ Help ⇨ Output first draft(s) ⇨ LG: `MergePDFs()`

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ English chart: Output first draft*: `MergePDFs()`

📂 **<../pdf_temp/txt>**: text files created by functions:

    Adobe Acrobat ⇨ Help ⇨ Get translations + coordinates ⇨ LG: `GetMetaCoord()`

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ English chart: Get metatext + coordinates (no TT)*: `GetMetaCoord()`

📂 **<../pdf_temp>**: PDF files created by functions:

    Adobe Acrobat ⇨ Help ⇨ Output final draft(s) ⇨ LG: `MergePDFs()`

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ English chart: Output final draft*: `MergePDFs()`

📂 **<../IPA_chart_trans/[YEAR]>**: PDF files created by function:

    Adobe Acrobat ⇨ Help ⇨ Ready chart(s) ⇨ LG: `ReadyChart()`

📂 **<../IPA_chart_orig/[YEAR]>**: PDF files created by functions:

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ Ready chart (no TT)*: `ReadyChart()`

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ Add tooltips (TT)*: `AddTooltips()`

📂 **<../pdf_temp/eps>**: EPS (Encapsulated PostScript) files created by function:

    Adobe Acrobat ⇨ Help ⇨ FONT *⇨ Export images*: `ExportImages()`

📂 **<../IPA_chart_orig/images>**: SVG versions of the EPS English charts (full & parts), created by the Illustrator script:

    Adobe Illustrator ⇨ File ⇨ Scripts: `1_EPSExportAsSVG()`

📂 **<../IPA_chart_orig/images>**: PNG versions of the SVG English charts (full & parts), created by the Illustrator script:

    Adobe Illustrator ⇨ File ⇨ Scripts: `2_SVGExportAsPNG()`

There are two groups of submenus in the *Adobe Acrobat ⇨ Help* menu: one set of commands is devoted to translations and produces charts in the Kiel font, the other is devoted to fonts and produces charts in English.

The TRANSLATION GROUP has five submenus:

0. *Get translations*
1. *Output first draft(s)*
2. *Get translations + coordinates*
3. *Output final draft(s)*
4. *Ready chart(s)*

Each of these submenus contains commands for all currently available translations, which can either be called individually – by selecting the appropriate language name, or as a group – by clicking ALL.

The FONT GROUP has six submenus:

I. *Kiel*
II. *Doulos*
III. *DejaVu*
IV. *unitipa*
V. *number chart*
VI. *All fonts*

Each of these contains the following six commands:

1. *Output first draft (no TT)*
2. *Get metatext + coordinates (no TT)*
3. *Output final draft (no TT)*
4. *Ready chart (no TT)*
5. *Add tooltips (TT)*
6. *Export images*

Commands 1-4 from the FONT GROUP correspond to submenu commands 2-5 from the TRANSLATION GROUP.

COLOUR CODING:

» `code fragments;` **`folder names & paths`**

» **`static, pre-defined text files`**

» **`static, pre-defined PDF files`**

» **`dynamic PDF & text files, output by Acrobat functions`**

» **`dynamic SVG files, output by the Illustrator function`**

» `examples` / examples

NAMING CONVENTIONS

» suffixes in file names:

» `E` = 'English/original'
» `H` = 'historical'
» `I` = 'interactive'

» `T` = 'translated'
» `mc` = 'metatext & coordinates'
» `t` = 'translation'

» prefixes in parameter names:

» `a` = 'array'
» `b` = 'Boolean'
» `f` = 'field'

» `n` = 'number'
» `o` = 'object'
» `s` = 'string'

» prefixes in field names:

   » `txt` = 'textfield'   » `btn` = 'button'

» field name parts:

   » `_CI` = 'contact info'   » `_S` = 'suprasegmentals'

   » `_CP` = 'consonants (pulmonic)'   » `_T` = 'tones'

   » `_CnP` = 'consonants (non-pulmonic)'   » `_V` = 'vowels'

   » `_D` = 'diacritics'   » `_c` = 'centre'

   » `_F` = 'footer'   » `_l` = 'left'

   » `_H` = 'header'   » `_r` = 'right'

   » `_OS` = 'other symbols'   » `_t` = 'top'

» e.g. `txt_D_c_08` stands for the textfield in the *Diacritics* section, central column, 8th row from the top

RECURRING PARAMETERS

» `[FONT]`: the target font; for translated charts, the *default font* is Kiel

» `[LG]`: the target language; for font charts, the *default language* is English

   » languages currently (May 2020) available are:

Arabic, ARA	German, DEU	Brazilian Portuguese, POR-BR
Catalan, CAT	Hebrew, HEB	European Portuguese, POR-EU
Chinese, ZHO from (JIPA 2011)	Italian, ITA	Spanish, SPA
Danish, DAN	Japanese, JPN	Swedish, SWE
Dutch, NLD	Korean, KOR	Thai, THA
English, ENG	Mongolian, MON	Turkish, TUR
Estonian, EST	Persian, FAS	Vietnamese, VIE
French, FRA	Polish, POL	Welsh, CYM

   » when new translation becomes available, language name & code have to be added to the arrays: `aLgs`, `aLgsSpecial`, `aLgFonts` in the Acrobat script (some possibilities are listed in the additional array `aAddLgs` and can be copied from there), e.g. in the array `aLgs` `["Lithuanian", "lit"]` should be placed between item `["Korean", "kor"]` and item `["Mongolian", "mon"]` in the following way :

      `["Korean", "kor"], ["Mongolian", "mon"]`

      `["Korean", "kor"], ["Lithuanian", "lit"], ["Mongolian", "mon"]`

   » language name & code + info about the translator(s) will also have to be added to the array `aLgs` in the *website* script `<../IPA_chart_trans/scripts/ipa_charts_T.js>` – here each language item in the array consists of: `[LG code, LG name in English / LG name in the original, translated by]`, e.g.:

      `["deu", "German / Deutsch", "Prof. Adrian Simpson"]`

   (array items must be separated by commas, but no comma is added after the last array item!)

» `[YEAR]`: the current year; folders for 2020 are included, all subsequent years will have to be added manually in the `<../IPA_chart_orig>` and `<../IPA_chart_trans>` folders; in the case of year different than current, `var sDate = util.printd("yyyy", d);` from Acrobat script will have to be replaced

Adobe Acrobat ⇨ Help ⇨ Get translations ⇨ LG

» REQUIRES: `<../pdf_trans/IPA_meta_[LG].pdf>`

» OUTPUTS: `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>`

» CALLS: `GetTrans([LG])`

    » CALLS: the `CleanUp()` function if **YES** is clicked; it splits "Simultaneous ʃ and x" string & field into individual components; it then calculates the best/max size of individual fields from these 3 groups: "Simultaneous…", the 1-2 lines of description below the *Diacritics* section, and the 2-4 lines of description below the *Vowels* section

» this function imports data from the PDF forms file with translated metatext into a string consisting of fieldname + translation rows, separated by ";;;", e.g.

        `txt_CI_06;;;Deutsch;;;`

        `txt_CP_l_01;;;Plosiv;;;`

» this string is then saved as a text (utf-8) file

» only the filename can be set for this text file, so Acrobat saves the file in the last known (or in the program default) location – please make sure to select the correct folder, i.e. `<../pdf_temp/txt>`

» the naming convention is the same within the English and translation files

» fieldnames are unique and serve as IDs allowing functions called later to extract metatext values from one file and coordinates from another

» only *Latin script languages* can be fully processed this way

    » the *non-Latin script languages* also output `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>` files, but they contain data from the first section of the PDF file only, i.e. from the eight `txt_CI_` fields

» additional *non-Latin script* files must be created manually and saved in the `<../pdf/arrays/>` folder, e.g.

`<../pdf/arrays/IPA_meta_[LG]_sp.txt>`

    » this is best done during the *non-Latin script* PDF file creation, e.g. in Adobe Illustrator – when field coordinates can be gotten; each such file must contain the following lines:

        `txt_H_00_a;;;`**`[left]`**`;;;762.45;;;`**`[right]`**`;;;742.95;;;[date];;;DoulosSIL;;;12.48;;;0`

        `txt_H_00_a0;;;61.3;;;738.52;;;546.99;;;725.56;;;[date] IPA;;;DoulosSIL;;;8.5;;;2`

        `txt_H_04_b_2;;;`**`[left]`**`;;;42.49;;;`**`[right]`**`;;;18.78;;;ŋ˚;;;DoulosSIL;;;16;;;1`

        `txt_OS_r_03_1;;;`**`[left]`**`;;;352.26;;;`**`[right]`**`;;;333.59;;;ʃ;;;IPALSUni;;;16;;;1`

        `txt_OS_r_03_2;;;`**`[left]`**`;;;352.26;;;`**`[right]`**`;;;333.59;;;x;;;IPALSUni;;;16;;;1`

    » **`[left]`** and **`[right]`** should be replaced with appropriate values denoting the left- and right-side coordinates of these fields; please note that ʃ, x, and ŋ˚ should be fixed-width:

        for ŋ˚, **`[right]`** = **`[left]`** + 15

        for ʃ, **`[right]`** = **`[left]`** + 10

        for x, **`[right]`** = **`[left]`** + 14

Adobe Acrobat ⇨ Help ⇨ Output first draft(s) ⇨ LG

Adobe Acrobat ⇨ Help ⇨ FONT *⇨ English chart: Output first draft*

» REQUIRES: **<../pdf_temp/txt/IPA_meta_[LG]_t.txt>** from GetTrans()

» REQUIRES PRE-EXISTING: **<../pdf/blank.pdf>**

         <../pdf/tables_3.pdf>

         <../pdf/tables_1.pdf> OR **<../pdf/tables_2.pdf>**

         <../pdf/IPA_Kiel_meta_[LG].pdf> *non-Latin scripts* only

         <../pdf/[FONT]_no_tables.pdf> OR **<../pdf/number_chart.pdf>**

         <../pdf/arrays/tfields.txt> OR **<../pdf/arrays/IPA_meta_[LG]_sp.txt>**

» OUTPUTS: **<../pdf_temp/IPA_[FONT]_[LG]_full.pdf>**

» CALLS: MergePDFs([FONT],[LG],bFinal)

» bFinal: Boolean value, false if this is the first version, otherwise true

» this function merges several PDFS into one and adds English or translated metatext in the form of textfields and buttons

     » CALLS (A): the AddWatermark(sFile,bTop) function several times:

         » sFile: file path & file name

         » bTop: Boolean value, true if file should be added on top of existing layers, otherwise false

           1. AddWatermark(**<../pdf/blank.pdf>**,false)

           2. AddWatermark(**<../pdf/tables_3.pdf>**,false)

           3. AddWatermark(**<../pdf/tables_1.pdf>**,false> (regular charts) OR

              AddWatermark(**<../pdf/tables_2.pdf>**,false) (number chart)

           4. AddWatermark(**<../pdf/IPA_Kiel_meta_[LG].pdf>**,true) *non-Latin scripts* only

              » currently (May 2020) there are six such files:

                <IPA_Kiel_meta_fas.pdf>   **<IPA_Kiel_meta_jpn.pdf>**   **<IPA_Kiel_meta_mon.pdf>**

                <IPA_Kiel_meta_heb.pdf>   **<IPA_Kiel_meta_kor.pdf>**   **<IPA_Kiel_meta_tha.pdf>**

» before any metatext is added, font footer info is placed, and the exact location of font buttons is calculated based on the position of certain keywords; that position cannot be determined in advance due to varying metatext length in translation, e.g.:

<p align="center">Typefaces: Doulos SIL (metatext); Doulos SIL, IPA Kiel, IPA LS Uni (symbols)</p>

<p align="center">Schriftarten: Doulos SIL (Metatext); Doulos SIL, IPA Kiel, IPA LS Uni (Symbole)</p>

<p align="center">Tipos de letra: Doulos SIL (metatexto); Doulos SIL, IPA Kiel, IPA LS Uni (símbolos)</p>

<p align="center">Các phông chữ: Doulos SIL (phần chữ); Doulos SIL, IPA Kiel, IPA LS Uni (phần ký hiệu phiên âm)</p>

» files with *non-Latin scripts* are prepared manually, e.g. in Illustrator, and the *non-Latin* content is saved in the form of outlines (text converted to vector graphics) – this ensures that on potential viewers' computers, the file will display correctly (regardless of the setup and fonts present and the OS handling of e.g. CJK or right-to-left scripts); the part of metatext which remains in *Latin script*, i.e. font names, **should not** be thus converted, but rather kept as text, since the function responsible for determining the coordinates of font buttons needs text to locate font name keywords

» CALLS (B): `GetFooterText([FONT],[LG],bLg)` (*Latin scripts* only), which selects font footer text depending on the typefaces used

  » CALLS (B.1): `GetTransFontMeta([LG],sTemp)`

  » `sTemp`: English metatext to be 'translated'

  » REQUIRES: **`<../pdf_temp/txt/IPA_meta_[LG]_t.txt>`**, the text file with translated metatext

  » returns the translated font footer text if applicable, otherwise the original English text

» CALLS (C): `AddFooterField(sWhat)` (*Latin scripts* only), which creates the font footer text field with the English or translated metatext

  » `sWhat`: the full text of the font footer

» CALLS (D): `AddFontButtons()`, which adds completely transparent font buttons on top of font names; two actions are assigned here: `on mouse over` (=field.userName) font info is displayed, `on mouse up` a font website is opened (if user allows Acrobat to perform such action)

  » this function searches for font name strings in the footer, grabs their coordinates, and places font buttons at the exact same coordinates

» CALLS (E): `AddWatermark(`**`<../pdf/[FONT]_no_tables.pdf>`**`,true)` (regular charts) OR
                `AddWatermark(`**`<../pdf/number_chart.pdf>`**`,true)` (number chart)

» CALLS (F): `AddMeta([FONT],[LG])`, which is a large function that basically places text fields with English or translated metatext onto the merged file created above

  » REQUIRES: active PDF file created by `MergePDFs()`

  » REQUIRES: **`<../pdf/arrays/tfields.txt>`**, a file that contains predefined field names & coordinates, which serves as the basis for creating the first draft of the chart

  » REQUIRES (in the case of *Latin script languages*):
    `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>` file from `GetTrans()` OR
    `<../pdf/arrays/IPA_meta_eng.txt>` the pre-existing array of English data

  » REQUIRES (in the case of *non-Latin script languages*): a special short version of the array, i.e.
    `<../pdf/arrays/IPA_meta_[LG]_sp.txt>` OR (if unavailable)
    `<../pdf/arrays/IPA_meta_all_sp.txt>` which contains default coordinates for the placement of these fields – these will have to be corrected manually later

  » HOW IT WORKS:

    » translations from **`<../pdf_temp/txt/IPA_meta_[LG]_t.txt>`** are matched with coordinates from **`<../pdf/arrays/tfields.txt>`** through the unique field names

    » the script determines whether translations require the same number of lines as the original, and if not, changes the predefined coordinates accordingly, e.g.:

      » "Voiced labial-velar approximant" fits into one line, whereas "Stimmhafter labial-velarer Approximant" must be split into two lines

      » "Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary" fits into three lines, while "Affrikate und Doppelartikulationen können durch zwei Symbole dargestellt werden, die durch einen Bogen verbunden werden" requires four

» in the case of *non-Latin script languages*, only a few fields are added:

 » 3 symbol fields, containing: ʃ, x, and ŋ° — the coordinates depend on the translated metatext

 » the `[YEAR]` field in the main chart header and the `(CC)` `[YEAR]` field above the first table

» PLEASE NOTE that, in all charts (English or translated, *Latin* or *non-Latin script*) the `[YEAR]` fields containing "[date]" (the main chart header and the (CC) field) are only assigned the (current) year value at the very end of the chart-making process, i.e. by the `ReadyChart()` function called from:

 Adobe Acrobat ⇨ *Help* ⇨ *Ready chart(s)* ⇨ LG: `ReadyChart()`

 Adobe Acrobat ⇨ *Help* ⇨ FONT ⇨ *Ready chart (no TT)*: `ReadyChart()`

» such a solution makes it possible to skip the whole chart-making process — which happens prior to that function — e.g. if the only required change is the updated year; please see below for more details

» this merged file together with added metatext fields is then saved as the function output, i.e.:

 `<../pdf_temp/IPA_[FONT]_[LG]_full.pdf>`

» EXAMPLES:

 » a translated chart in Kiel is created from:

  `<blank.pdf>` + **`<tables_3.pdf>`** + **`<tables_1.pdf>`** + **`<Kiel_no_tables.pdf>`**

   + **`<IPA_Kiel_meta_[LG].pdf>`** (in the case of *non-Latin script languages*)

 » the English chart in Doulos is created from:

  `<blank.pdf>` + **`<tables_3.pdf>`** + **`<tables_2.pdf>`** + **`<Doulos_no_tables.pdf>`**

 » and the number chart is created from:

  `<blank.pdf>` + **`<tables_3.pdf>`** + **`<tables_2.pdf>`** + **`<number_chart.pdf>`**

Adobe Acrobat ⇨ Help ⇨ Get translations + coordinates ⇨ LG

Adobe Acrobat ⇨ Help ⇨ FONT ⇨ English chart: Get metatext + coordinates (no TT)

» REQUIRES PRE-EXISTING: `<../pdf/blank.pdf>`

» REQUIRES: `<../pdf_temp/IPA_[FONT]_[LG]_full.pdf>` from `MergePDFs()`

» OUTPUTS: `<../pdf_temp/txt/IPA_[FONT]_[LG]_mc.txt>`

» CALLS: `GetMetaCoord([FONT],[LG])`

» this function cycles through all form fields in the file, extracting the following info:

   » in the case of textfields:

      » field name: `txt_F_06_1`
      » field coordinates, calculated from the 0,0 point in the *bottom* left corner of the page:
         `418.617 147.5` (left top field position)
         `451.617 132.2` (right bottom field position)

      » field value (i.e. translation): `oder`
      » text font: `DoulosSIL`
      » text size: `6`
      » text colour: `G,0` (= black)
      » text alignment: `center`

   » in the case of buttons:

      » field name: `btn_Font_IPA_LS_Uni`
      » field coordinates:
         `356.776 18.100` (left top field position)
         `394.761 5.766` (right bottom field position)

      » tooltip (on mouse over): `[tooltip text]`
         see below for example

» these values, each separated by ";;;" from the next, are concatenated as a string:

   » textfield:

      `[field name];;;[left X];;;[top Y];;;[right X];;;[bottom Y];;;[trans];;;[text font];;;`
      `[text size];;;[text colour];;;[align]`

      `txt_F_06_1;;;418.617;;;147.5;;;451.617;;;132.2;;;oder;;;DoulosSIL;;;6;;;G,0;;;center;;;`

   » button:

      `[field name];;;[left X];;;[top Y];;;[right X];;;[bottom Y];;;[tooltip text];;;[link];;;`
      `[];;;[];;;[]`

      » PLEASE NOTE that if the original string value contains line-breaks, as may be the case for tooltips, they must be replaced by something else before the value is concatenated (in the text file, line-breaks serve as item delimiters, so each set of values for a given field is separated from the next by `\n`), here, the `[br]` string is used instead of `\n`

      » PLEASE NOTE that delimiters `;;;` and `[br]` are arbitrary, what's important is that they be unique, so that other functions reading strings and find (and replace) them with ease, while keeping the rest of the text intact – in this case there's very little danger that there will be meaningful strings `;;;` and `[br]` occurring in the metatext translation

» the complete string is exported into a text file object (utf-8)

» only the filename can be set for this text file, so Acrobat saves the file in the last known or in the program default location – please make sure to select the correct folder, i.e. `<../pdf_temp/txt>`

Adobe Acrobat ⇨ Help ⇨ Output final draft(s) ⇨ LG

Adobe Acrobat ⇨ Help ⇨ FONT *⇨ English chart: Output final draft*

» REQUIRES: `<../pdf_temp/txt/IPA_meta_[LG]_mc.txt>` from `GetTrans()`

» REQUIRES PRE-EXISTING: `<../pdf/blank.pdf>`

　　　　　　　　　`<../pdf/tables_3.pdf>`

　　　　　　　　　`<../pdf/tables_1.pdf>` OR `<../pdf/tables_2.pdf>`

　　　　　　　　　`<../pdf/IPA_Kiel_meta_[LG].pdf>` *non-Latin scripts* only

　　　　　　　　　`<../pdf/[FONT]_no_tables.pdf>` OR `<../pdf/number_chart.pdf>`

» OUTPUTS: `<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>`

» CALLS: `MergePDFs([FONT],[LG],bFinal)`

» `bFinal=true`: Boolean value (`false` if this is the first version, otherwise `true`)

» PLEASE NOTE that this function is also called from the earlier *Output first draft*, where `bFinal=false`

» this function merges several PDFS into one and adds English or translated metatext as PDF form fields

　　» CALLS: the `AddWatermark(sFile,bTop)` function several times:

　　　　» `sFile`: file path & file name

　　　　» `bTop`: Boolean value, `true` if file should be added on top of existing layers, otherwise `false`

　　　　　1. `AddWatermark(<../pdf/blank.pdf>,false)`

　　　　　2. `AddWatermark(<../pdf/tables_3.pdf>,false)`

　　　　　3. `AddWatermark(<../pdf/tables_1.pdf>,false>` (regular charts) OR

　　　　　　`AddWatermark(<../pdf/tables_2.pdf>,false)` (number chart)

　　　　　4. `AddWatermark(<../pdf/IPA_Kiel_meta_[LG].pdf>,true)` *non-Latin scripts* only

　　　　　5. `AddWatermark(<../pdf/[FONT]_no_tables.pdf>,true)` (regular charts) OR

　　　　　　`AddWatermark(<../pdf/number_chart.pdf>,true)` (number chart)

　　» CALLS: `AddMetaFinal(sFile)`, which is places text fields with English or translated metatext onto the merged file created above

　　　　» REQUIRES: active PDF file created by `MergePDFs()`

　　　　» `sFile` is the location and filename of the text file created by the `GetMetaCoord()` function, i.e. `<../pdf_temp/txt/IPA_meta_[LG]_mc.txt>`, which contains all pertinent form fields data

　　　　» this function imports data from the text file into arrays, then cycles through it twice – first creating textfields, then buttons (so that they are positioned on top of textfields)

　　　　» PLEASE NOTE that unlike the `AddMeta()` function, data is imported from just one file so it isn't necessary to create buttons in advance and calculate their position – everything has already been done at earlier stages and saved by the `GetMetaCoord()` function in one text file

» PLEASE NOTE that in all charts (English or translated, *Latin* or *non-Latin script*) the `[YEAR]` fields containing "[date]" (the main chart header and the (CC) field) are only assigned the (current) year value at the very end of the chart-making process, i.e. by the `ReadyChart()` function called from:

　　Adobe Acrobat ⇨ Help ⇨ Ready chart(s) ⇨ LG: `ReadyChart()`

　　Adobe Acrobat ⇨ Help ⇨ FONT *⇨ Ready chart (no TT)*: `ReadyChart()`

Adobe Acrobat ⇨ *Help* ⇨ *Ready chart(s)* ⇨ LG

Adobe Acrobat ⇨ *Help* ⇨ FONT ⇨ *Ready chart (no TT)*

» REQUIRES: `<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>` from `MergePDFs()`

            `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>` (translations only) from `GetTrans()`

» REQUIRES PRE-EXISTING: `<../pdf/copyright/c_Kiel_trans.xmp>` (translated charts)   OR

            `<../pdf/copyright/c_[FONT].xmp>` (English charts)

» OUTPUTS: `<../IPA_chart_trans/[DATE]/IPA_Kiel_[DATE]_full_[LG].pdf>` (translated charts)   OR

            `<../IPA_chart_orig/[DATE]/IPA_[FONT]_[DATE]_full.pdf>` (English charts)

» CALLS: `ReadyChart([FONT],[LG])`

» this function does nothing by itself except opening the file output by `MergePDFs()` and (later) saving it

» individual tasks are carried out by four other functions:

  » `AddWatermark(<../pdf/blank_cc.pdf>,false)`, which adds a layer containing Creative Commons copyright symbols

  » `AddCCDate()`, which replaces "[date]" strings with the current year string and then adds buttons at the same coordinates as:

    » Creative Commons copyright symbols — with a short explanation of the symbols and a link to the Creative Commons website

    » "[date] IPA" string — with a longer licence info and a link to the International Phonetic Association website, specifically to "The International Phonetic Alphabet and the IPA Chart" page, which contains the section "Reproduction of The International Phonetic Alphabet"

  » `AddCopyright([FONT],[LG])`, which deals with PDF file properties, including *Additional Metadata*

    » in the case of translations, data from `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>` is required, specifically, if applicable:

      » translation author's or contact person's salutation, first name and last name

      » group name or project leaders' names

      » contributors' names

      » the English name of the target language

    » for both types of charts, a pre-defined XMP file `<c_Kiel_trans.xmp>` or `<c_[FONT].xmp>` is imported which contains the following info:

      » title `<dc:title>`, *Document Title* can be displayed instead of *File Name* in the window's title bar, this is either set manually for each file:

        Adobe Acrobat ⇨ *File* ⇨ *Properties* ⇨ *Initial View* ⇨ *Windows Options* ⇨ *Show* ⇨ …

        or by setting *Open Options* via a custom *Action* (but not via Javascript) which must be created separately and can process a file folder or a specified group of files (please refer to the Adobe Acrobat Help for more info)

      » description (i.e., in the case of charts, a description of the given chart's font) `<dc:description>`

      » creators `<dc:creator>`

      » copyright `<dc:rights>`

      » keywords `<pdf:Keywords>` and `<dc:subject>`

- » the content of the xmp file is converted to string
  - » `<c_[FONT].xmp>` contains the expression `[YYYY]` — to be replaced by (current) year string
  - » `<c_Kiel_trans.xmp>` contains three expressions:
    - » `[YYYY]` — to be replaced by (current) year string
    - » `[TRANS]` — to be replaced by translation authors' salutation(s), first name(s) and last name(s) and/or group name, from the file `<../pdf_temp/txt/IPA_meta_[LG]_t.txt>`
    - » `[LG]` — to be replaced by the target language name, as above
  - » that string is then imported as the PDF file metadata
- » `FlattenFile()`, which converts all textfields into ordinary text, in three stages:
  - » hiding all button fields
  - » flattening all visible fields (i.e. everything apart from buttons)
  - » unhiding all buttons fields
  - » it also removes all file attachments that may have been imported into the PDF by previous functions, e.g. the XMP metadata file (*the metadata itself remains intact*)

Adobe Acrobat ⇨ Help ⇨ FONT ⇨ Add tooltips (TT)

» REQUIRES: **<../IPA_chart_orig/[DATE]/IPA_[FONT]_[DATE]_full_flat.pdf>** from `ReadyChart()`

» REQUIRES PRE-EXISTING: **<../pdf/arrays/IPA_s.txt>** OR

                                 <../pdf/arrays/IPA_n.txt> (number chart)

» OUTPUTS: **<../IPA_chart_orig/[DATE]/IPA_[FONT]_[DATE]_tooltips.pdf>**

» CALLS: `AddTooltips([FONT],[LG])`

» text files contain a list of parameters for each tooltip – apart from field coordinates these are:

    » IPA description, e.g. `CENTRALIZED`

    » IPA number, e.g. `415`

    » IPA name, e.g. `Umlaut`

    » AFII code, e.g. `E221`

    » TIPA code, e.g. `\"v`

    » HEX value, e.g. `0308`

    » Unicode name, e.g. `COMBINING DIAERESIS`

    » Unicode range, e.g. `Combining Diacritical Marks`

    » PLEASE NOTE that the two text files differ only in coordinates values

» just as it was with all other info on mouse over, tooltips are in fact transparent buttons with one action only: `on mouse over (=field.userName)` a list of these eight values is displayed, in the following order:

    » IPA description   » Unicode range

    » IPA name   » HEX value

    » IPA number (*does not apply to the number chart*)   » TIPA code

    » Unicode name   » AFII code

» in the case of the number chart, it is superfluous to display IPA number in the tooltip, so it is omitted

» displaying the corresponding symbol has been considered, but since the appearance of the tooltip is governed by the application (e.g. Acrobat Reader), there is no reliable way to correctly show all symbols, and text size in tooltips is usually small, so – especially in the case of diacritics – not much would be visible

» to differentiate these from other buttons, the `btn_` prefix in the fieldname has been replaced with `tt_`

PLEASE NOTE that the output of the last two functions, i.e. `ReadyChart()` and `AddTooltips()`, will have to be copied into the **<../IPA_chart_orig/pdfs/>** folder to be accessed by the website links.

Adobe Acrobat ⇨ *Help* ⇨ FONT ⇨ *Export images*

» REQUIRES: `<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>` from `MergePDFs()`

» REQUIRES PRE-EXISTING: `<../pdf/blank_cc.pdf>`

`<../pdf/arrays/tfields.txt>`

» OUTPUTS: `<../pdf_temp/IPA_[FONT]_[YEAR]_[PART].pdf>` AND

`<../pdf_temp/eps/IPA_[FONT]_[YEAR]_[PART].eps>`

» CALLS: `ExportImages([FONT],[LG])`

» PLEASE NOTE that the input file for this function *is not* the same at the output file from the previous one, because it requires a non-flattened PDF with textfields; it requires the file created by the `MergePDFs([FONT],[LG],bFinal)` function called from *Output final draft(s)*

» PLEASE NOTE that closing a file in Acrobat from Javascript automatically saves that file, therefore, to keep the input file intact, it needs to be saved as something else

» first, the full chart is exported to EPS (all form fields are flattened, and all fonts are converted to outlines, so that there is no text in the file, just vector graphics)

» secondly, the same is done for individual chart sections:

  » the sizes and coordinates of subsections are predefined in the `<../pdf/arrays/tfields.txt>` file

  » header fields other than that of the selected chart section are deleted from the file so that their fragments do not show in the image

  » (CC), [date], "IPA" + font info footer is added below that section

  » page is cropped to show just the selected section (with margins)

» `[PART]` = name of the chart section that is exported (or "full" for the entire chart); these names follow the naming convention used to textfields, e.g. fields in the "Consonants (non-pulmonic)" section begin with "txt_CnP", where "txt" stands for "textfield" and "CnP" for "Consonants (non-pulmonic)" – this chart fragment will be saved as:

  `<../pdf_temp/IPA_[FONT]_[YEAR]_CnP.pdf>` AND

  `<../pdf_temp/eps/IPA_[FONT]_[YEAR]_CnP.eps>`

» since the output file is saved as PDF with a new name, the original input file remains intact so that this action can be repeated for all chart sections; the complete EPS output of the function is:

  `<IPA_[FONT]_[YEAR]_full.eps>`   `<IPA_[FONT]_[YEAR]_D.eps>`

  `<IPA_[FONT]_[YEAR]_CP.eps>`   `<IPA_[FONT]_[YEAR]_V.eps>`

  `<IPA_[FONT]_[YEAR]_CnP.eps>`   `<IPA_[FONT]_[YEAR]_S.eps>`

  `<IPA_[FONT]_[YEAR]_OS.eps>`   `<IPA_[FONT]_[YEAR]_T.eps>`

Adobe Illustrator ⇨ File ⇨ Scrips ⇨ 1_EPSExportAsSVG

» REQUIRES: **<../pdf_temp/eps/IPA_[FONT]_[YEAR]_[PART].eps>** from ExportImages()

» OUTPUTS: **<../IPA_chart_orig/images/IPA_[FONT]_[YEAR]_[PART].svg>**

» CALLS: 1_EPSExportAsSVG.jsx

» converts EPS files (created by the previous function) into the SVG format, with appropriate margins

» the same result can be achieved using e.g. Inkscape, or some on-line converter, but this script uses predetermined values and has the batch convert option:

  » if no files are open, the function converts all EPS files from the **<../pdf_temp/eps>** folder

  » otherwise, only files currently opened are processed

Adobe Illustrator ⇨ File ⇨ Scrips ⇨ 2_SVGExportAsPNG

» REQUIRES: **<../IPA_chart_orig/images/IPA_[FONT]_[YEAR]_[PART].svg>** from 1_EPSExportAsSVG

» OUTPUTS: **<../IPA_chart_orig/images/IPA_[FONT]_[YEAR]_[PART]_[RES].png>**

» CALLS: 2_SVGExportAsPNG.jsx

» converts SVG files (created by the previous function) into the PNG format, with the following settings:

  » resolution [RES] = 300ppi, 600ppi, 1200ppi   » matte = true

  » transparency = false   » antiAliasing = true

» the same result can be achieved using e.g. Inkscape, or some on-line converter, but this script uses predetermined values and has the batch convert option:

  » if no files are open, the function converts all AI/PDF/SVG files from the **<../IPA_chart_orig/images>** folder

  » otherwise, only files currently opened are processed

Website chart images

  » the new website scripts display vector images of the chart (or its parts) in the IPA website setting

  » depending on the browser settings:

    » static PNG files created by the 2_SVGExportAsPNG are available under one of the three resolution links: 300ppi, 600ppi, or 1200ppi OR

    » dynamically created PNG files are available under one of the three resolution links: 300ppi, 600ppi, or 1200ppi; or a ***custom resolution*** from the range 72ppi to 1200ppi can be set and downloaded

  » list of tested browsers:

    » browsers that support the use of asynchronous functions and canvas utilised in the website script (tested on the most recent versions): Brave, Google Chrome, MS Edge, Opera, Vivaldi

    » browsers which use the more limited website version with static images: Epic Privacy Browser, Safari 5.1.7 (for Windows), UC Browser, Yandex

    » Firefox supports the use of asynchronous functions and canvas but limits max area size to 124,992,400 — and the 1200ppi would require more than that (the max supported resolution for the full chart seems to be 1156ppi)

I/O FILES, OVERVIEW:

	INPUT OR REQUIRED FILES	OUTPUT
GetTrans()	<../pdf_trans/IPA_meta_[LG].pdf>	<../pdf_temp/txt/IPA_meta_[LG]_t.txt>
MergePDFs()	<../pdf_temp/txt/IPA_meta_[LG]_t.txt>	<../pdf_temp/IPA_[FONT]_[LG]_full.pdf>
GetMetaCoord()	<../pdf_temp/IPA_[FONT]_[LG]_full.pdf>	<../pdf_temp/txt/IPA_[FONT]_[LG]_mc.txt>
MergePDFs()	<../pdf_temp/txt/IPA_[FONT]_[LG]_mc.txt>	<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>
ReadyChart()	<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>	<../IPA_chart_trans/[YEAR]/IPA_[FONT]_[YEAR]_full_[LG].pdf>
	<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>	<../IPA_chart_orig/[YEAR]/IPA_[FONT]_[YEAR]_full.pdf>
AddTooltips()	<../IPA_chart_orig/[YEAR]/IPA_[FONT]_[YEAR]_full_flat.pdf>	<../IPA_chart_orig/[YEAR]/IPA_[FONT]_[YEAR]_tooltips.pdf>
ExportImages()	<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>	<../pdf_temp/IPA_[FONT]_[YEAR]_[PART].pdf>
	<../pdf_temp/IPA_[FONT]_[LG]_full_forms.pdf>	<../pdf_temp/eps/IPA_[FONT]_[YEAR]_[PART].eps>
EPSExportAsSVG	<../pdf_temp/eps/IPA_[FONT]_[YEAR]_[PART].eps>	<../IPA_chart_orig/images/IPA_[FONT]_[YEAR]_[PART].svg>