Customization update

2023년 5월 27일 토요일 오전 6:09

1. remove EngineDump project
2. remove SumatraPdf-dll project

<table>
<tr><th>file</th><th>before and after</th></tr>
<tr><td>pdf-annot.c</td><td>
<table>
<tr><th>function</th><th>before</th><th>after</th></tr>
<tr><td>make the text red and reduce font size to 9</td><td>pdf_set_annot_default_appearance(ctx, annot, "Helv", 12, nelem(black), black);</td><td>//float CMYK[] = {0, 0.5, 0.3, 0};
//pdf_set_annot_default_appearance(ctx, annot, "Helv", 9, 4, CMYK);
pdf_set_annot_default_appearance(ctx, annot, "Helv", 9, nelem(red), red);</td></tr>
<tr><td>Prevent Image annot from being cleared</td><td>void
pdf_dirty_annot(fz_context *ctx, pdf_annot *annot)
{
pdf_annot_request_resynthesis(ctx, annot);
}</td><td>void
pdf_dirty_annot(fz_context *ctx, pdf_annot *annot)
{
enum pdf_annot_type ret = pdf_annot_type(ctx, annot);
if (ret != PDF_ANNOT_IMAGE)
pdf_annot_request_resynthesis(ctx, annot);
}</td></tr>
<tr><td>insert Bbox and image type annotation</td><td>const char *
pdf_string_from_annot_type(fz_context *ctx, enum pdf_annot_type type)
...
...
...
case PDF_ANNOT_REDACT: return "Redact";
case PDF_ANNOT_STAMP: return "Stamp";
case PDF_ANNOT_CARET: return "Caret";</td><td>const char *
pdf_string_from_annot_type(fz_context *ctx, enum pdf_annot_type type)
...
...
...
case PDF_ANNOT_REDACT: return "Redact";
case PDF_ANNOT_BBOX: return "BBox";
case PDF_ANNOT_STAMP: return "Stamp";
case PDF_ANNOT_CARET: return "Caret";
case PDF_ANNOT_IMAGE: return "Image";</td></tr>
<tr><td>insert Bbox and image type annotation</td><td>int
pdf_annot_type_from_string(fz_context *ctx, const char *subtype)
{
...
...
...
if (!strcmp("Redact", subtype)) return PDF_ANNOT_REDACT;
if (!strcmp("Stamp", subtype)) return PDF_ANNOT_STAMP;
if (!strcmp("Caret", subtype)) return PDF_ANNOT_CARET;</td><td>int
pdf_annot_type_from_string(fz_context *ctx, const char *subtype)
{
...
...
...
if (!strcmp("Redact", subtype)) return PDF_ANNOT_REDACT;
if (!strcmp("BBox", subtype)) return PDF_ANNOT_BBOX;
if (!strcmp("Stamp", subtype)) return PDF_ANNOT_STAMP;
if (!strcmp("Caret", subtype)) return PDF_ANNOT_CARET;
if (!strcmp("Image", subtype)) return PDF_ANNOT_IMAGE;</td></tr>
<tr><td>1. set rect of image annotation
2. Change to a transparent border for image object</td><td>case PDF_ANNOT_CARET:
{
fz_rect caret_rect = { 12, 12, 12+18, 12+15 };
pdf_set_annot_rect(ctx, annot, caret_rect);
pdf_set_annot_color(ctx, annot, 3, blue);
}
break;</td><td>case PDF_ANNOT_CARET:
{
fz_rect caret_rect = {12, 12, 12 + 18, 12 + 15};
pdf_set_annot_rect(ctx, annot, caret_rect);
pdf_set_annot_color(ctx, annot, 3, blue);
}
break;
case PDF_ANNOT_IMAGE:
{
fz_rect image_rect = {12, 12, 12 + 200, 12 + 150};
pdf_set_annot_rect(ctx, annot, image_rect);
float transparent[] = {0, 0, 0, 0};
pdf_set_annot_color(ctx, annot, 4, transparent);
}
break;</td></tr>
<tr><td>set subtype of Bbox and image rect annotation</td><td>static pdf_obj *rect_subtypes[] = {
PDF_NAME(Text),
PDF_NAME(FreeText),
PDF_NAME(Square),
PDF_NAME(Circle),
PDF_NAME(Redact),
PDF_NAME(Stamp),
PDF_NAME(Caret),
PDF_NAME(Popup),
PDF_NAME(FileAttachment),
PDF_NAME(Sound),
PDF_NAME(Movie),
PDF_NAME(Widget),
NULL,
};</td><td>static pdf_obj *rect_subtypes[] = {
PDF_NAME(Text),
PDF_NAME(FreeText),
PDF_NAME(Square),
PDF_NAME(Circle),
PDF_NAME(Redact),
PDF_NAME(BBox),
PDF_NAME(Stamp),
PDF_NAME(Caret),
PDF_NAME(Image),
PDF_NAME(Popup),
PDF_NAME(FileAttachment),
PDF_NAME(Sound),
PDF_NAME(Movie),
PDF_NAME(Widget),
NULL,
};</td></tr>
<tr><td>set subtype of Bbox and image quad point annotation</td><td>static pdf_obj *quad_point_subtypes[] = {
PDF_NAME(Highlight),
PDF_NAME(Link),
PDF_NAME(Squiggly),
PDF_NAME(StrikeOut),
PDF_NAME(Underline),
PDF_NAME(Redact),
NULL,
};</td><td>static pdf_obj *quad_point_subtypes[] = {
PDF_NAME(Highlight),
PDF_NAME(Link),
PDF_NAME(Squiggly),
PDF_NAME(StrikeOut),
PDF_NAME(Underline),
PDF_NAME(Redact),
PDF_NAME(BBox),
NULL,</td></tr>
</table>
</td></tr>
</table>

			};
	set subtype of Bbox and image markup annotation	static pdf_obj *markup_subtypes[] = { PDF_NAME(Text), PDF_NAME(FreeText), PDF_NAME(Line), PDF_NAME(Square), PDF_NAME(Circle), PDF_NAME(Polygon), PDF_NAME(PolyLine), PDF_NAME(Highlight), PDF_NAME(Underline), PDF_NAME(Squiggly), PDF_NAME(StrikeOut), PDF_NAME(Redact), PDF_NAME(Stamp), PDF_NAME(Caret), PDF_NAME(Ink), PDF_NAME(FileAttachment), PDF_NAME(Sound), NULL, };	static pdf_obj *markup_subtypes[] = { PDF_NAME(Text), PDF_NAME(FreeText), PDF_NAME(Line), PDF_NAME(Square), PDF_NAME(Circle), PDF_NAME(Polygon), PDF_NAME(PolyLine), PDF_NAME(Highlight), PDF_NAME(Underline), PDF_NAME(Squiggly), PDF_NAME(StrikeOut), PDF_NAME(Redact), PDF_NAME(BBox), PDF_NAME(Stamp), PDF_NAME(Caret), PDF_NAME(Image), PDF_NAME(Ink), PDF_NAME(FileAttachment), PDF_NAME(Sound), NULL, };
EditAnnotation.cpp	function	before	after
	include iostream and fstream	-	#include <iostream> #include <fstream>
	1. Force focus to input window when creating a comment **2. Automatically select entire text**	static void DoContents(EditAnnotationsWindow* ew, Annotation* annot) { str::Str s = Contents(annot); // TODO: don't replace if already is "\r\n" Replace(s, "\n", "\r\n"); ew->editContents->SetText(s.Get()); ew->staticContents->SetIsVisible(true); ew->editContents->SetIsVisible(true); }	static void DoContents(EditAnnotationsWindow* ew, Annotation* annot) { str::Str s = Contents(annot); // TODO: don't replace if already is "\r\n" Replace(s, "\n", "\r\n"); ew->editContents->SetText(s.Get()); keybd_event(VK_CONTROL, 0, 0, 0); // push Ctrl key keybd_event('A', 0, 0, 0); // push 'A' key keybd_event('A', 0, KEYEVENTF_KEYUP, 0); // release A key keybd_event(VK_CONTROL, 0, KEYEVENTF_KEYUP, 0); // release Ctrl key ew->staticContents->SetIsVisible(true); ew->editContents->SetIsVisible(true); SetFocus(ew->editContents->hwnd); }
	Remove timer object	static UINT_PTR gMainWindowRerenderTimer = 0; static MainWindow* gMainWindowForRender = nullptr; // TODO: there seems to be a leak static void ContentsChanged(EditAnnotationsWindow* ew) { auto txt = ew->editContents->GetTextTemp(); SetContents(ew->annot, txt); EnableSaveIfAnnotationsChanged(ew); MainWindow* win = ew->tab->win; if (gMainWindowRerenderTimer != 0) { // logf("ContentsChanged: killing existing timer for re-render of MainWindow\n"); KillTimer(win->hwndCanvas, gMainWindowRerenderTimer); gMainWindowRerenderTimer = 0; } UINT timeoutInMs = 75; gMainWindowForRender = win; if (MainWindowStillValid(gMainWindowForRender)) { gMainWindowRerenderTimer = SetTimer(win->hwndCanvas, 1, timeoutInMs, [](HWND, UINT, UINT_PTR, DWORD) { // logf("ContentsChanged: re-rendering MainWindow\n"); MainWindowRerender(gMainWindowForRender); }); } else { // logf("ContentsChanged: NOT re-rendering MainWindow because is not valid anymore\n"); } }	static MainWindow* gMainWindowForRender = nullptr; // TODO: there seems to be a leak static void ContentsChanged(EditAnnotationsWindow* ew) { auto txt = ew->editContents->GetTextTemp(); SetContents(ew->annot, txt); EnableSaveIfAnnotationsChanged(ew); MainWindow* win = ew->tab->win; gMainWindowForRender = win; if (MainWindowStillValid(gMainWindowForRender)) { MainWindowRerender(gMainWindowForRender, true); } }
	Set selection of list box to the last comment after deleting a comment.	void DeleteAnnotationAndUpdateUI(WindowTab* tab, EditAnnotationsWindow* ew, Annotation* annot) { annot = FindMatchingAnnotation(ew, annot); DeleteAnnotation(annot); if (ew != nullptr) { // can be null if called from Menu.cpp and annotations window is not visible RebuildAnnotations(ew); UpdateUIForSelectedAnnotation(ew, 0); ew->listBox->SetCurrentSelection(0); } MainWindowRerender(tab->win); ToolbarUpdateStateForWindow(tab->win, false); }	void DeleteAnnotationAndUpdateUI(WindowTab* tab, EditAnnotationsWindow* ew, Annotation* annot) { annot = FindMatchingAnnotation(ew, annot); DeleteAnnotation(annot); if (ew != nullptr) { // can be null if called from Menu.cpp and annotations window is not visible RebuildAnnotations(ew); int iC = ew->listBox->GetCount()-1; if (iC>=0) { UpdateUIForSelectedAnnotation(ew, iC); ew->listBox->SetCurrentSelection(iC); } } MainWindowRerender(tab->win); ToolbarUpdateStateForWindow(tab->win, false);

			}
	1. Set default text content as "Text" **2. Remove free text border** **3. Copy and paste an image file into a PDF page**	Annotation* EngineMupdfCreateAnnotation(EngineBase* engine, AnnotationType typ, int pageNo, PointF pos) { EngineMupdf* epdf = AsEngineMupdf(engine); fz_context* ctx = epdf->ctx; auto pageInfo = epdf->GetFzPageInfo(pageNo, true); ScopedCritSec cs(epdf->ctxAccess); auto page = pdf_page_from_fz_page(ctx, pageInfo->page); enum pdf_annot_type atyp = (enum pdf_annot_type)typ; auto annot = pdf_create_annot(ctx, page, atyp); pdf_set_annot_modification_date(ctx, annot, time(nullptr)); if (pdf_annot_has_author(ctx, annot)) { char* defAuthor = gGlobalPrefs->annotations.defaultAuthor; // if "(none)" we don't set it if (!str::Eq(defAuthor, "(none)")) { const char* author = getuser(); if (!str::EmptyOrWhiteSpaceOnly(defAuthor)) { author = defAuthor; } pdf_set_annot_author(ctx, annot, author); } } switch (typ) { case AnnotationType::Text: case AnnotationType::FreeText: case AnnotationType::Stamp: case AnnotationType::Caret: case AnnotationType::Square: case AnnotationType::Circle: { fz_rect trect = pdf_annot_rect(ctx, annot); float dx = trect.x1 - trect.x0; trect.x0 = pos.x; trect.x1 = trect.x0 + dx; float dy = trect.y1 - trect.y0; trect.y0 = pos.y; trect.y1 = trect.y0 + dy; pdf_set_annot_rect(ctx, annot, trect); } break; case AnnotationType::Line: { fz_point a{pos.x, pos.y}; fz_point b{pos.x + 100, pos.y + 50}; pdf_set_annot_line(ctx, annot, a, b); } break; } if (typ == AnnotationType::FreeText) { pdf_set_annot_contents(ctx, annot, "This is a text..."); pdf_set_annot_border(ctx, annot, 1); } pdf_update_annot(ctx, annot); auto res = MakeAnnotationPdf(epdf, annot, pageNo); if (typ == AnnotationType::Text) { AutoFreeStr iconName = GetAnnotationTextIcon(); if (!str::Eql(iconName, "Note")) { SetIconName(res, iconName.Get()); } auto col = GetAnnotationTextIconColor(); SetColor(res, col); } else if (typ == AnnotationType::Underline) { auto col = GetAnnotationUnderlineColor(); SetColor(res, col); } else if (typ == AnnotationType::Highlight) { auto col = GetAnnotationHighlightColor(); SetColor(res, col); } else if (typ == AnnotationType::Squiggly) { auto col = GetAnnotationSquigglyColor(); SetColor(res, col); } else if (typ == AnnotationType::StrikeOut) { auto col = GetAnnotationStrikeOutColor(); SetColor(res, col); } pdf_drop_annot(ctx, annot); return res; }	Annotation* EngineMupdfCreateAnnotation(EngineBase* engine, AnnotationType typ, int pageNo, PointF pos) { if (typ == AnnotationType::Image) { // Open the clipboard, and verify that the image data is there. if (!OpenClipboard(nullptr)) return NULL; if (!IsClipboardFormatAvailable(CF_BITMAP)) { CloseClipboard(); return NULL; } } EngineMupdf* epdf = AsEngineMupdf(engine); fz_context* ctx = epdf->ctx; auto pageInfo = epdf->GetFzPageInfo(pageNo, true); ScopedCritSec cs(epdf->ctxAccess); auto page = pdf_page_from_fz_page(ctx, pageInfo->page); enum pdf_annot_type atyp = (enum pdf_annot_type)typ; auto annot = pdf_create_annot(ctx, page, atyp); pdf_set_annot_modification_date(ctx, annot, time(nullptr)); if (pdf_annot_has_author(ctx, annot)) { char* defAuthor = gGlobalPrefs->annotations.defaultAuthor; // if "(none)" we don't set it if (!str::Eq(defAuthor, "(none)")) { const char* author = getuser(); if (!str::EmptyOrWhiteSpaceOnly(defAuthor)) { author = defAuthor; } pdf_set_annot_author(ctx, annot, author); } } switch (typ) { case AnnotationType::Text: case AnnotationType::FreeText: break; case AnnotationType::Stamp: case AnnotationType::Caret: case AnnotationType::Image: case AnnotationType::Square: case AnnotationType::Circle: { fz_rect trect = pdf_annot_rect(ctx, annot); float dx = trect.x1 - trect.x0; trect.x0 = pos.x; trect.x1 = trect.x0 + dx; float dy = trect.y1 - trect.y0; trect.y0 = pos.y; trect.y1 = trect.y0 + dy; pdf_set_annot_rect(ctx, annot, trect); } break; case AnnotationType::Line: { fz_point a{pos.x, pos.y}; fz_point b{pos.x + 100, pos.y + 50}; pdf_set_annot_line(ctx, annot, a, b); } break; } if (typ == AnnotationType::FreeText) { pdf_set_annot_contents(ctx, annot, "Text"); pdf_set_annot_border(ctx, annot, 0); fz_rect trect = pdf_annot_rect(ctx, annot); trect.x0 = pos.x; trect.y0 = pos.y + 10; trect.x1 = pos.x; trect.y1 = pos.y + 10; pdf_set_annot_rect(ctx, annot, trect); } pdf_update_annot(ctx, annot); auto res = MakeAnnotationPdf(epdf, annot, pageNo); if (typ == AnnotationType::Text) { AutoFreeStr iconName = GetAnnotationTextIcon(); if (!str::Eql(iconName, "Note")) { SetIconName(res, iconName.Get()); } auto col = GetAnnotationTextIconColor(); SetColor(res, col); } else if (typ == AnnotationType::Underline) { auto col = GetAnnotationUnderlineColor(); SetColor(res, col); } else if (typ == AnnotationType::Highlight) { auto col = GetAnnotationHighlightColor(); SetColor(res, col); } else if (typ == AnnotationType::Squiggly) { auto col = GetAnnotationSquigglyColor(); SetColor(res, col);

			} else if (typ == AnnotationType::StrikeOut) { auto col = GetAnnotationStrikeOutColor(); SetColor(res, col); } pdf_drop_annot(ctx, annot); if (typ == AnnotationType::Image) { // Retrieve the bitmap handle from the clipboard. HBITMAP hBitmap = static_cast<HBITMAP> (GetClipboardData(CF_BITMAP)); if (hBitmap == nullptr) { CloseClipboard(); return NULL; } // Extract DIB data from a bitmap handle. BITMAP bm; GetObject(hBitmap, sizeof(BITMAP), &bm); int size = bm.bmWidthBytes * bm.bmHeight; unsigned char* data = new unsigned char[size]; GetBitmapBits(hBitmap, size, data); // Write the extracted DIB data to a file. std::ofstream file("clipboard_image.bmp", std::ios::binary); if (!file.is_open()) { delete[] data; CloseClipboard(); return NULL; } BITMAPFILEHEADER bmfh = {0}; bmfh.bfType = 0x4d42; // "BM" bmfh.bfOffBits = sizeof(BITMAPFILEHEADER) + sizeof(BITMAPINFOHEADER); bmfh.bfSize = bmfh.bfOffBits + size; file.write(reinterpret_cast<const char*>(&bmfh), sizeof(bmfh)); BITMAPINFOHEADER bmih = {0}; bmih.biSize = sizeof(BITMAPINFOHEADER); bmih.biWidth = bm.bmWidth; bmih.biHeight = bm.bmHeight; // Save top-down method bmih.biPlanes = 1; bmih.biBitCount = bm.bmBitsPixel; bmih.biCompression = BI_RGB; bmih.biSizeImage = size; file.write(reinterpret_cast<const char*>(&bmih), sizeof(bmih)); for (int y = bm.bmHeight - 1; y >= 0; --y) { file.write(reinterpret_cast<const char*>(data + y * bm.bmWidthBytes), bm.bmWidthBytes); } file.close(); // Clean up unused handles and data. delete[] data; CloseClipboard(); // Attaches a clipboard image to the stamp. Stamp functionality implemented in Image fz_image *img = fz_new_image_from_file(ctx, "clipboard_image.bmp"); pdf_set_annot_stamp_image(ctx, annot, img); fz_drop_image(ctx, img); } return res; }
add image to annotation type	static AnnotationType gAnnotsWithColor[] = { AnnotationType::Stamp, AnnotationType::Text, AnnotationType::FileAttachment, AnnotationType::Sound, AnnotationType::Caret, AnnotationType::FreeText, AnnotationType::Ink, AnnotationType::Line, AnnotationType::Square, AnnotationType::Circle, AnnotationType::Polygon, AnnotationType::PolyLine, AnnotationType::Highlight, AnnotationType::Underline, AnnotationType::StrikeOut, AnnotationType::Squiggly, };	static AnnotationType gAnnotsWithColor[] = { AnnotationType::Stamp, AnnotationType::Text, AnnotationType::FileAttachment, AnnotationType::Sound, AnnotationType::Caret, AnnotationType::Image, AnnotationType::FreeText, AnnotationType::Ink, AnnotationType::Line, AnnotationType::Square, AnnotationType::Circle, AnnotationType::Polygon, AnnotationType::PolyLine, AnnotationType::Highlight, AnnotationType::Underline, AnnotationType::StrikeOut, AnnotationType::Squiggly, };
Declaring clipboard image Trackbar and Track Position Objects	struct EditAnnotationsWindow : Wnd { void OnSize(UINT msg, UINT type, SIZE size) override; void OnClose() override; WindowTab* tab = nullptr; LayoutBase* mainLayout = nullptr; ListBox* listBox = nullptr; Static* staticRect = nullptr; Static* staticAuthor = nullptr; Static* staticModificationDate = nullptr; Static* staticPopup = nullptr; Static* staticContents = nullptr; Edit* editContents = nullptr; Static* staticTextAlignment = nullptr; DropDown* dropDownTextAlignment = nullptr; Static* staticTextFont = nullptr; DropDown* dropDownTextFont = nullptr;	struct EditAnnotationsWindow : Wnd { void OnSize(UINT msg, UINT type, SIZE size) override; void OnClose() override; WindowTab* tab = nullptr; LayoutBase* mainLayout = nullptr; ListBox* listBox = nullptr; Static* staticRect = nullptr; Static* staticAuthor = nullptr; Static* staticModificationDate = nullptr; Static* staticPopup = nullptr; Static* staticContents = nullptr; Edit* editContents = nullptr; Static* staticTextAlignment = nullptr; DropDown* dropDownTextAlignment = nullptr; Static* staticTextFont = nullptr; DropDown* dropDownTextFont = nullptr;

	Static* staticTextSize = nullptr; Trackbar* trackbarTextSize = nullptr;	Static* staticTextSize = nullptr; Trackbar* trackbarTextSize = nullptr; Static* staticImageSize = nullptr; Trackbar* trackbarImageSize = nullptr; Static* staticObjectWidth = nullptr; Static* staticObjectHeight = nullptr; Trackbar* trackbarObjectWidth = nullptr; Trackbar* trackbarObjectHeight = nullptr;
Make clipboard image trackbar and track position objects visible	static void HidePerAnnotControls(EditAnnotationsWindow* ew) { ew->staticRect->SetIsVisible(false); ew->staticAuthor->SetIsVisible(false); ew->staticModificationDate->SetIsVisible(false); ew->staticPopup->SetIsVisible(false); ew->staticContents->SetIsVisible(false); ew->editContents->SetIsVisible(false); ew->staticTextAlignment->SetIsVisible(false); ew->dropDownTextAlignment->SetIsVisible(false); ew->staticTextFont->SetIsVisible(false); ew->dropDownTextFont->SetIsVisible(false); ew->staticTextSize->SetIsVisible(false); ew->trackbarTextSize->SetIsVisible(false);	static void HidePerAnnotControls(EditAnnotationsWindow* ew) { ew->staticRect->SetIsVisible(false); ew->staticAuthor->SetIsVisible(false); ew->staticModificationDate->SetIsVisible(false); ew->staticPopup->SetIsVisible(false); ew->staticContents->SetIsVisible(false); ew->editContents->SetIsVisible(false); ew->staticTextAlignment->SetIsVisible(false); ew->dropDownTextAlignment->SetIsVisible(false); ew->staticTextFont->SetIsVisible(false); ew->dropDownTextFont->SetIsVisible(false); ew->staticTextSize->SetIsVisible(false); ew->trackbarTextSize->SetIsVisible(false); ew->staticImageSize->SetIsVisible(false); ew->trackbarImageSize->SetIsVisible(false); ew->staticObjectWidth->SetIsVisible(false); ew->staticObjectHeight->SetIsVisible(false); ew->trackbarObjectWidth->SetIsVisible(false); ew->trackbarObjectHeight->SetIsVisible(false);
Initialize cliboard image Trackbar command	HidePerAnnotControls(ew); if (ew->annot) { DoRect(ew, ew->annot); DoAuthor(ew, ew->annot); DoModificationDate(ew, ew->annot); DoPopup(ew, ew->annot); DoContents(ew, ew->annot); DoTextAlignment(ew, ew->annot); DoTextFont(ew, ew->annot); DoTextSize(ew, ew->annot); DoImageSize(ew, ew->annot); DoTextColor(ew, ew->annot); DoLineStartEnd(ew, ew->annot); DoIcon(ew, ew->annot); DoBorder(ew, ew->annot); DoColor(ew, ew->annot); DoInteriorColor(ew, ew->annot); DoOpacity(ew, ew->annot); DoSaveEmbed(ew, ew->annot); ew->buttonDelete->SetIsVisible(true); }	HidePerAnnotControls(ew); if (ew->annot) { DoRect(ew, ew->annot); DoAuthor(ew, ew->annot); DoModificationDate(ew, ew->annot); DoPopup(ew, ew->annot); DoContents(ew, ew->annot); DoTextAlignment(ew, ew->annot); DoTextFont(ew, ew->annot); DoTextSize(ew, ew->annot); DoImageSize(ew, ew->annot); DoObjectSize(ew, ew->annot); DoTextColor(ew, ew->annot); DoLineStartEnd(ew, ew->annot); DoIcon(ew, ew->annot); DoBorder(ew, ew->annot); DoColor(ew, ew->annot); DoInteriorColor(ew, ew->annot); DoOpacity(ew, ew->annot); DoSaveEmbed(ew, ew->annot); ew->buttonDelete->SetIsVisible(true); }
Trackbar initialization actual code	**Put the code after the following code** static void DoTextSize(EditAnnotationsWindow* ew, Annotation* annot)	static void DoImageSize(EditAnnotationsWindow* ew, Annotation* annot) { if (Type(annot) != AnnotationType::Image) { return; } // get rect information RectF rect = GetBounds(annot); AutoFreeStr s = str::Format(_TRA("Image Width: %.1f"), rect.dx); ew->staticImageSize->SetText(s.Get()); // set position of trackbar to the clipboard image width ew->trackbarImageSize->SetValue(int(rect.dx)); ew->staticImageSize->SetIsVisible(true); ew->trackbarImageSize->SetIsVisible(true); }
Trackbar scrolling changes	**Put the code after the following code** static void DoTextSize(EditAnnotationsWindow* ew, Annotation* annot) static void DoImageSize(EditAnnotationsWindow* ew, Annotation* annot)	static void ClipboardSizeChanging(EditAnnotationsWindow* ew, TrackbarPosChangingEvent* ev) { EngineMupdf* e = ew->annot->engine; auto ctx = e->ctx; // get current width of clipboard image RectF rect = GetBounds(ew->annot); fz_rect fzrect = {0, 0, 10, 10}; // get position of trackbar scroll int ipos = ew->trackbarImageSize->GetValue(); if (ipos == 0) // do nothing return; // change the image width fzrect.x0 = rect.x; fzrect.x1 = rect.x + float(ipos); fzrect.y0 = rect.y; fzrect.y1 = rect.y + float(ipos) * rect.dy / rect.dx; // new rect for the changed image width pdf_set_annot_rect(ctx, ew->annot->pdfannot, fzrect); // display new image width in the static text AutoFreeStr s = str::Format(_TRA("Image Width: %.1f"), fzrect.x1 -

			fzrect.x0); ew->staticImageSize->SetText(s.Get()); // apply changed image pdf_update_annot(ctx, ew->annot->pdfannot); EnableSavelfAnnotationsChanged(ew); MainWindowRerender(ew->tab->win); }
	Trackbar and objectbar **add to trackbar and objectbar position annotation**	static void CreateMainLayout(EditAnnotationsWindow* ew) { HWND parent = ew->hwnd; auto vbox = new VBox(); vbox->alignMain = MainAxisAlign::MainStart; vbox->alignCross = CrossAxisAlign::Stretch; … … … { TrackbarCreateArgs args; args.parent = parent; args.rangeMin = 8; args.rangeMax = 36; auto w = new Trackbar(); w->SetInsetsPt(4, 0, 0, 0); w->Create(args); w->onPosChanging = [ew](auto&& PH1) { return TextFontSizeChanging(ew, std::forward<decltype(PH1)>(PH1)); }; ew->trackbarTextSize = w; vbox->AddChild(w); } … … …	static void CreateMainLayout(EditAnnotationsWindow* ew) { HWND parent = ew->hwnd; auto vbox = new VBox(); vbox->alignMain = MainAxisAlign::MainStart; vbox->alignCross = CrossAxisAlign::Stretch; … … … { TrackbarCreateArgs args; args.parent = parent; args.rangeMin = 8; args.rangeMax = 36; auto w = new Trackbar(); w->SetInsetsPt(4, 0, 0, 0); w->Create(args); w->onPosChanging = [ew](auto&& PH1) { return TextFontSizeChanging(ew, std::forward<decltype(PH1)>(PH1)); }; ew->trackbarTextSize = w; vbox->AddChild(w); } { auto w = CreateStatic(parent, _TRA("Image Width:")); w->SetInsetsPt(8, 0, 0, 0); ew->staticImageSize = w; vbox->AddChild(w); } { TrackbarCreateArgs args; args.parent = parent; args.rangeMin = 20; args.rangeMax = 400; auto w = new Trackbar(); w->SetInsetsPt(8, 0, 0, 0); w->Create(args); w->onPosChanging = [ew](auto&& PH1) { return ClipboardSizeChanging(ew, std::forward<decltype(PH1)>(PH1)); }; ew->trackbarImageSize = w; vbox->AddChild(w); } { auto w = CreateStatic(parent, _TRA("Object width:")); w->SetInsetsPt(8, 0, 0, 0); ew->staticObjectWidth = w; vbox->AddChild(w); } { TrackbarCreateArgs args; args.parent = parent; args.rangeMin = 20; args.rangeMax = 400; auto w = new Trackbar(); w->SetInsetsPt(8, 0, 0, 0); w->Create(args); w->onPosChanging = [ew](auto&& PH1) { return ObjectSizeChanging(ew, std::forward<decltype(PH1)>(PH1)); }; ew->trackbarObjectWidth = w; vbox->AddChild(w); } { auto w = CreateStatic(parent, _TRA("Object height:")); w->SetInsetsPt(8, 0, 0, 0); ew->staticObjectHeight = w; vbox->AddChild(w); } { TrackbarCreateArgs args; args.parent = parent; args.rangeMin = 20; args.rangeMax = 400; auto w = new Trackbar(); w->SetInsetsPt(8, 0, 0, 0);

		w->Create(args); w->onPosChanging = [ew](auto&& PH1) { return ObjectSizeChanging(ew, std::forward<decltype(PH1)>(PH1)); }; ew->trackbarObjectHeight = w; vbox->AddChild(w); }
object size width and height	below DoImageSize	static void DoObjectSize(EditAnnotationsWindow* ew, Annotation* annot) { if (Type(annot) != AnnotationType::Circle && Type(annot) != AnnotationType::Square) { return; } // get rect information RectF rect = GetBounds(annot); AutoFreeStr sw = str::Format(_TRA("Object width: %.1f"), rect.dx); AutoFreeStr sh = str::Format(_TRA("Object height: %.1f"), rect.dy); ew->staticObjectWidth->SetText(sw.Get()); ew->staticObjectHeight->SetText(sh.Get()); // set position of trackbar to the clipboard image width ew->trackbarObjectWidth->SetValue(int(rect.dx)); ew->trackbarObjectHeight->SetValue(int(rect.dy)); ew->staticObjectWidth->SetIsVisible(true); ew->staticObjectHeight->SetIsVisible(true); ew->trackbarObjectWidth->SetIsVisible(true); ew->trackbarObjectHeight->SetIsVisible(true); }
object size width and height	below DoImageSize and DoObjectSize	static void ObjectSizeChanging(EditAnnotationsWindow* ew, TrackbarPosChangingEvent* ev) { EngineMupdf* e = ew->annot->engine; auto ctx = e->ctx; // get current width of clipboard image RectF rect = GetBounds(ew->annot); fz_rect fzrect = {0, 0, 10, 10}; // get position of trackbar scroll int wpos = ew->trackbarObjectWidth->GetValue(); int hpos = ew->trackbarObjectHeight->GetValue(); if (wpos == 0 || hpos==0) // do nothing return; // change the image width fzrect.x0 = rect.x; fzrect.x1 = rect.x + float(wpos); fzrect.y0 = rect.y; fzrect.y1 = rect.y + float(hpos); // new rect for the changed image width pdf_set_annot_rect(ctx, ew->annot->pdfannot, fzrect); // display new image width in the static text AutoFreeStr sw = str::Format(_TRA("Object width: "), fzrect.x1 - fzrect.x0); ew->staticObjectWidth->SetText(sw.Get()); AutoFreeStr sh = str::Format(_TRA("Object height: "), fzrect.y1 - fzrect.y0); ew->staticObjectWidth->SetText(sh.Get()); // apply changed image pdf_update_annot(ctx, ew->annot->pdfannot); EnableSaveIfAnnotationsChanged(ew); MainWindowRerender(ew->tab->win); }
Remove fill color option of the image clipboard in the annotation window	static void DoColor(EditAnnotationsWindow* ew, Annotation* annot) { size_t n = dimof(gAnnotsWithColor); bool isVisible = IsAnnotationTypeInArray(gAnnotsWithColor, n, Type(annot)); if (!isVisible) { return; } PdfColor col = GetColor(annot); DropDownFillColors(ew->dropDownColor, col, ew->currCustomColor); n = dimof(gAnnotsIsColorBackground); bool isBgCol = IsAnnotationTypeInArray(gAnnotsIsColorBackground, n, Type(annot)); if (isBgCol) { ew->staticColor->SetText(_TR("Background Color:")); } else { ew->staticColor->SetText(_TR("Color:")); } ew->staticColor->SetIsVisible(true); ew->dropDownColor->SetIsVisible(true); }	static void DoColor(EditAnnotationsWindow* ew, Annotation* annot) { if (Type(annot) == AnnotationType::Image) return; size_t n = dimof(gAnnotsWithColor); bool isVisible = IsAnnotationTypeInArray(gAnnotsWithColor, n, Type(annot)); if (!isVisible) { return; } PdfColor col = GetColor(annot); DropDownFillColors(ew->dropDownColor, col, ew->currCustomColor); n = dimof(gAnnotsIsColorBackground); bool isBgCol = IsAnnotationTypeInArray(gAnnotsIsColorBackground, n, Type(annot)); if (isBgCol) { ew->staticColor->SetText(_TR("Background Color:")); } else { ew->staticColor->SetText(_TR("Color:")); } ew->staticColor->SetIsVisible(true); ew->dropDownColor->SetIsVisible(true); }
If you want to change the background color of the free text, insert the code in the area you marked with the highlighter.	static void DoColor(EditAnnotationsWindow* ew, Annotation* annot) { if (Type(annot) == AnnotationType::Caret) return; size_t n = dimof(gAnnotsWithColor); bool isVisible = IsAnnotationTypeInArray(gAnnotsWithColor, n, Type(annot));	static void DoColor(EditAnnotationsWindow* ew, Annotation* annot) { if (Type(annot) == AnnotationType::Image) return; size_t n = dimof(gAnnotsWithColor); bool isVisible = IsAnnotationTypeInArray(gAnnotsWithColor, n, Type(annot));

	skip!!!	if (!isVisible) { return; } PdfColor col = GetColor(annot); if (Type(annot) == AnnotationType::FreeText) { col = 0xffffffff; SetColor(ew->annot, col); } DropDownFillColors(ew->dropDownColor, col, ew->currCustomColor); n = dimof(gAnnotsIsColorBackground); bool isBgCol = IsAnnotationTypeInArray(gAnnotsIsColorBackground, n, Type(annot)); if (isBgCol) { ew->staticColor->SetText(_TR("Background Color:")); } else { ew->staticColor->SetText(_TR("Color:")); } ew->staticColor->SetIsVisible(true); ew->dropDownColor->SetIsVisible(true); }	if (!isVisible) { return; } PdfColor col = GetColor(annot); if (Type(annot) == AnnotationType::FreeText) { col = 0xffffffff; SetColor(ew->annot, col); } DropDownFillColors(ew->dropDownColor, col, ew->currCustomColor); n = dimof(gAnnotsIsColorBackground); bool isBgCol = IsAnnotationTypeInArray(gAnnotsIsColorBackground, n, Type(annot)); if (isBgCol) { ew->staticColor->SetText(_TR("Background Color:")); } else { ew->staticColor->SetText(_TR("Color:")); } ew->staticColor->SetIsVisible(true); ew->dropDownColor->SetIsVisible(true); }
pdf-appearance.c	function	before	after
	Improved Korean input issues	static void write_string(fz_context *ctx, fz_buffer *buf, fz_text_language lang, fz_font *font, const char *fontname, float size, const char *text, const char *end) { struct text_walk_state state; int last_enc = 0; init_text_walk(ctx, &state, lang, font, text, end); while (next_text_walk(ctx, &state)) {	static void write_string(fz_context *ctx, fz_buffer *buf, fz_text_language lang, fz_font *font, const char *fontname, float size, const char *text, const char *end) { struct text_walk_state state; int last_enc = 0; init_text_walk(ctx, &state, lang, font, text, end); while (next_text_walk(ctx, &state)) { if (state.text[0] == ' ' || state.text[0] == '1' || state.text[0] == '2' || state.text[0] == '3' || state.text[0] == '4' || state.text[0] == '5' || state.text[0] == '6' || state.text[0] == '7' || state.text[0] == '8' || state.text[0] == '9' || state.text[0] == '0' || state.text[0] == '~' || state.text[0] == '`' || state.text[0] == '!' || state.text[0] == '@' || state.text[0] == '#' || state.text[0] == '$' || state.text[0] == '%' || state.text[0] == '^' || state.text[0] == '&' || state.text[0] == '*' || state.text[0] == '(' || state.text[0] == ')' || state.text[0] == '-' || state.text[0] == '_' || state.text[0] == '+' || state.text[0] == '=' || state.text[0] == '{' || state.text[0] == '}' || state.text[0] == '[' || state.text[0] == ']' || state.text[0] == '|' || state.text[0] == ':' || state.text[0] == ';' || state.text[0] == '"' || state.text[0] == ',' || state.text[0] == '.' || state.text[0] == '<' || state.text[0] == '>' || state.text[0] == '/' || state.text[0] == '?') state.enc = ENC_LATIN; ... ...
	Adjust underline position	a = lerp_point(quad[LL], quad[UL], 1/7.0f); b = lerp_point(quad[LR], quad[UR], 1/7.0f);	a = lerp_point(quad[LL], quad[UL], 1/24.0f); b = lerp_point(quad[LR], quad[UR], 1/24.0f);
	Resize Rect(BBox) object to fit text size	pdf_write_free_text_appearance(fz_context *ctx, pdf_annot *annot, fz_buffer *buf, fz_rect *rect, fz_rect *bbox, fz_matrix *matrix, pdf_obj **res) { const char *font; float size, color[4]; const char *text; float w, h, t, b; int q, r, n; int lang; /* /Rotate is an undocumented annotation property supported by Adobe */ text = pdf_annot_contents(ctx, annot); r = pdf_dict_get_int(ctx, annot->obj, PDF_NAME(Rotate)); q = pdf_annot_quadding(ctx, annot); pdf_annot_default_appearance(ctx, annot, &font, &size, &n, color); lang = pdf_annot_language(ctx, annot); w = rect->x1 - rect->x0; h = rect->y1 - rect->y0; if (r == 90 || r == 270) t = h, h = w, w = t; *matrix = fz_rotate(r); *bbox = fz_make_rect(0, 0, w, h);	pdf_write_free_text_appearance(fz_context *ctx, pdf_annot *annot, fz_buffer *buf, fz_rect *rect, fz_rect *bbox, fz_matrix *matrix, pdf_obj **res) { const char* font; float size, color[4]; const char* text; float w, h, t, b; int q, r, n; int lang; /* /Rotate is an undocumented annotation property supported by Adobe */ text = pdf_annot_contents(ctx, annot); r = pdf_dict_get_int(ctx, annot->obj, PDF_NAME(Rotate)); q = pdf_annot_quadding(ctx, annot); pdf_annot_default_appearance(ctx, annot, &font, &size, &n, color); lang = pdf_annot_language(ctx, annot); b = pdf_write_border_appearance(ctx, annot, buf); fz_font* fonta = fz_new_base14_font(ctx, full_font_name(&font)); float var_w = 0; float max_w = 400.0; float fontheight = size; float lineNo = 0; get_var_rect_from_text(ctx, lang, fonta, size, text, &var_w,

	pdf_write_opacity(ctx, annot, buf, res); pdf_write_dash_pattern(ctx, annot, buf, res); if (pdf_write_fill_color_appearance(ctx, annot, buf)) fz_append_printf(ctx, buf, "0 0 %g %g re\nf\n", w, h); b = pdf_write_border_appearance(ctx, annot, buf); if (b > 0) { if (n == 4) fz_append_printf(ctx, buf, "%g %g %g %g K\n", color[0], color[1], color[2], color[3]); else if (n == 3) fz_append_printf(ctx, buf, "%g %g %g RG\n", color[0], color[1], color[2]); else if (n == 1) fz_append_printf(ctx, buf, "%g G\n", color[0]); else if (n == 0) fz_append_printf(ctx, buf, "0 G\n"); fz_append_printf(ctx, buf, "%g %g %g %g re\nS\n", b/2, b/2, w-b, h-b); } fz_append_printf(ctx, buf, "%g %g %g %g re\nW\nn\n", b, b, w-b* 2, h-b*2); write_variable_text(ctx, annot, buf, res, lang, text, font, size, n, color, q, w, h, b*2, 0.8f, 1.2f, 1, 0, 0); }	&lineNo); if (var_w < max_w) { rect->x1 = rect->x0 + var_w; rect->y1 = rect->y0 + fontheight + lineNo * fontheight; } else { rect->x1 = rect->x0 + max_w; rect->y1 = rect->y0 + fontheight + round(var_w / max_w) * fontheight + lineNo * fontheight; } rect->y1 += 2 * b + 5.0; rect->x1 += 2 * b + 5.0; w = rect->x1 - rect->x0; h = rect->y1 - rect->y0; if (r == 90 || r == 270) t = h, h = w, w = t; *matrix = fz_rotate(r); *bbox = fz_make_rect(0, 0, w, h); pdf_write_opacity(ctx, annot, buf, res); pdf_write_dash_pattern(ctx, annot, buf, res); if (pdf_write_fill_color_appearance(ctx, annot, buf)) fz_append_printf(ctx, buf, "0 0 %g %g re\nf\n", w, h); if (b > 0) { if (n == 4) fz_append_printf(ctx, buf, "%g %g %g %g K\n", color[0], color[1], color[2], color[3]); else if (n == 3) fz_append_printf(ctx, buf, "%g %g %g RG\n", color[0], color[1], color[2]); else if (n == 1) fz_append_printf(ctx, buf, "%g G\n", color[0]); else if (n == 0) fz_append_printf(ctx, buf, "0 G\n"); fz_append_printf(ctx, buf, "%g %g %g %g re\nS\n", 0, 0, w, h); } fz_append_printf(ctx, buf, "%g %g %g %g re\nW\nn\n", b, b, w - b, h - b); write_variable_text(ctx, annot, buf, res, lang, text, font, size, n, color, q, w, h, b, 1.0f, 1.0f, 1, 0, 1.0f); }
Returns a Rect object size that fits the text size	**Put the code after the following code** static void layout_variable_text(fz_context *ctx, fz_layout_block *out, const char *text, fz_text_language lang, const char *fontname, float size, int q, float x, float y, float w, float h, float padding, float baseline, float lineheight, int multiline, int comb, int adjust_baseline)	static void get_var_rect_from_text(fz_context* ctx, fz_text_language lang, fz_font* font, float size, const char* text, float* rectw, float* lineNo) { struct text_walk_state state; float x = 0; float xt = 0; float y = 0; init_text_walk(ctx, &state, lang, font, text, NULL); while (next_text_walk(ctx, &state)) { xt += state.w * size; if (state.u == '\n' || state.u == '\r') { y++; xt = 0; } x = max(x, xt); } *rectw = x; *lineNo = y; }
insert Bbox and image object	case PDF_ANNOT_CARET: pdf_write_caret_appearance(ctx, annot, buf, rect, bbox, res); *matrix = fz_identity; break; case PDF_ANNOT_REDACT: pdf_write_redact_appearance(ctx, annot, buf, rect, res); *matrix = fz_identity; *bbox = *rect; break;	case PDF_ANNOT_CARET: pdf_write_caret_appearance(ctx, annot, buf, rect, bbox, res); *matrix = fz_identity; break; case PDF_ANNOT_IMAGE: case PDF_ANNOT_REDACT: pdf_write_redact_appearance(ctx, annot, buf, rect, res); *matrix = fz_identity; *bbox = *rect; break; case PDF_ANNOT_BBOX: pdf_write_textbox_appearance(ctx, annot, buf, rect, res); *matrix = fz_identity; *bbox = *rect; break;
print Text Box	**Put the code after the following code** static void pdf_write_redact_appearance(fz_context *ctx, pdf_annot *annot, fz_buffer *buf, fz_rect *rect, pdf_obj **res)	static void pdf_write_textbox_appearance(fz_context *ctx, pdf_annot *annot, fz_buffer *buf, fz_rect *rect, pdf_obj **res) { fz_point quad[4]; pdf_obj *qp; int i, n;

```
        pdf_write_opacity(ctx, annot, buf, res);

        fz_append_printf(ctx, buf, "110 0 0 RG\n");

        qp = pdf_dict_get(ctx, annot->obj, PDF_NAME(QuadPoints));
        n = pdf_array_len(ctx, qp);
        if (n > 0)
        {
                *rect = fz_empty_rect;
    float xmin = 100000;
    float xmax = 0;
    float ymin = 100000;
    float ymax = 0;
        for (i = 0; i < n; i += 8)
        {
                extract_quad(ctx, quad, qp, i);
                union_quad(rect, quad, 1);
                 xmin = min(rect->x0, xmin);
                 xmax = max(rect->x1, xmax);
                ymin = min(rect->y0, ymin);
                 ymax = max(rect->y1, ymax);
        }
    fz_append_printf(ctx, buf, "%g %g m\n", xmin, ymax);
    fz_append_printf(ctx, buf, "%g %g l\n", xmax, ymax);
    fz_append_printf(ctx, buf, "%g %g l\n", xmax, ymin);
    fz_append_printf(ctx, buf, "%g %g l\n", xmin, ymin);
    fz_append_printf(ctx, buf, "s\n");
      fz_append_printf(ctx, buf, "%g %g m\n", xmin+1, ymin+1);
    fz_append_printf(ctx, buf, "%g %g l\n", xmax-1, ymin+1);
    fz_append_printf(ctx, buf, "%g %g l\n", xmax-1, ymax-1);
    fz_append_printf(ctx, buf, "%g %g l\n", xmin+1, ymax-1);
    fz_append_printf(ctx, buf, "s\n");
        }
        else
        {
                fz_append_printf(ctx, buf, "%g %g m\n", rect->x0+1, rect->
                y0+1);
                fz_append_printf(ctx, buf, "%g %g l\n", rect->x1-1, rect->y0
                +1);
                fz_append_printf(ctx, buf, "%g %g l\n", rect->x1-1, rect->
                y1-1);
                fz_append_printf(ctx, buf, "%g %g l\n", rect->x0+1, rect->
                y1-1);
                fz_append_printf(ctx, buf, "s\n");
        }
}
```

object.h

function	before	after
Remove double spacing error produced by enter key event	const char *pdf_to_text_string(fz_context *ctx, pdf_obj *obj);	void replace_crlf(char* str); const char *pdf_to_text_string(fz_context *ctx, pdf_obj *obj);

pdf-object.c

function	before	after
Remove double spacing error produced by enter key event	const char *pdf_to_text_string(fz_context *ctx, pdf_obj *obj) { RESOLVE(obj); if (OBJ_IS_STRING(obj)) { if (!STRING(obj)->text) STRING(obj)->text = pdf_new_utf8 _from_pdf_string(ctx, STRING(obj)->buf, STRING(obj)->len); return STRING(obj)->text; } return ""; }	void replace_crlf(char* str) { char* p = str; while (*p) { if (*p == '\r' && *(p + 1) == '\n') { *p++ = '\n'; memmove(p, p + 1, strlen(p + 1) + 1); } else { p++; } } } const char *pdf_to_text_string(fz_context *ctx, pdf_obj *obj) { RESOLVE(obj); if (OBJ_IS_STRING(obj)) { if (!STRING(obj)->text) STRING(obj)->text = pdf_new_utf8 _from_pdf_string(ctx, STRING(obj)->buf, STRING(obj)->len); char *res = STRING(obj)->text; replace_crlf(res); return res; } return ""; }

WinGui.cpp

function	before	after
Prevent wrong window appearing	HWND Wnd::CreateCustom(const CreateCustomArgs& args) { … … … HWND hwndTmp = ::CreateWindowExW(exStyle, className, titleW, style, x, y, dx, dy, parent, m, inst, createParams);	HWND Wnd::CreateCustom(const CreateCustomArgs& args) { … … … HWND hwndTmp = ::CreateWindowExW(exStyle, className, titleW, style, -50000, -50000, dx, dy, parent, m, inst, createParams);

Menu.h

function	before	after
declare the free text on mouse double click	void OnWindowContextMenu(MainWindow* win, int x, int y);	void OnWindowContextMenu(MainWindow* win, int x, int y); void OnCreateFreeText(MainWindow* win, int x, int y);

Menu.cpp

function	before	after
Create free text annotation on mouse double click of page	**Put the code after the following code** void OnAboutContextMenu(MainWindow* win, int x, int y)	void OnCreateFreeText(MainWindow* win, int x, int y) { DisplayModel* dm = win->AsFixed(); CrashIf(!dm); if (!dm) { return; } Point cursorPos{x, y}; WindowTab* tab = win->CurrentTab(); IPageElement* pageEl = dm->GetElementAtPos(cursorPos, nullptr); int pageNoUnderCursor = dm->GetPageNoByPoint(cursorPos); PointF ptOnPage = dm->CvtFromScreen(cursorPos, pageNoUnderCursor); EngineBase* engine = dm->GetEngine(); char* value = nullptr; if (pageEl) { value = pageEl->GetValue(); } Vec<Annotation*> createdAnnots; auto annot = EngineMupdfCreateAnnotation(engine, AnnotationType::FreeText, pageNoUnderCursor, ptOnPage); if (annot) { MainWindowRerender(win); ToolbarUpdateStateForWindow(win, true); createdAnnots.Append(annot); } if (!createdAnnots.empty()) { // TODO: leaking createdAnnots? StartEditAnnotations(tab, createdAnnots); } }
Reduce two steps to one stpe for accessing the Change context menu	static MenuDef menuDefContext[] = { { _TRN("&Copy Selection"), CmdCopySelection, }, { _TRN("S&election"), (UINT_PTR)menuDefSelection, }, { _TRN("Copy &Link Address"), CmdCopyLinkTarget, }, { _TRN("Copy Co&mment"), CmdCopyComment, }, { _TRN("Copy &Image"), CmdCopyImage, }, // note: strings cannot be "" or else items are not there { "Add to favorites", CmdFavoriteAdd,	static MenuDef menuDefContext[] = { { _TRN("&Copy Selection"), CmdCopySelection, }, { _TRN("S&election"), (UINT_PTR)menuDefSelection, }, { _TRN("Copy &Link Address"), CmdCopyLinkTarget, }, { _TRN("Copy Co&mment"), CmdCopyComment, }, { _TRN("Copy &Image"), CmdCopyImage, }, // note: strings cannot be "" or else items are not there { "Add to favorites", CmdFavoriteAdd,

```
    },
    {
        "Remove from favorites",
        CmdFavoriteDel,
    },
    {
        _TRN("Show &Favorites"),
        CmdFavoriteToggle,
    },
    {
        _TRN("Show &Bookmarks"),
        CmdToggleBookmarks,
    },
    {
        _TRN("Show &Toolbar"),
        CmdToggleToolbar,
    },
    {
        _TRN("Show &Scrollbars"),
        CmdToggleScrollbars,
    },
    {
        kMenuSeparator,
        kMenuSeparatorID,
    },
    {
        _TRN("Select Annotation in Editor"),
        CmdSelectAnnotation,
    },
    {
        _TRN("Delete Annotation₩tDel"),
        CmdDeleteAnnotation,
    },
    {
        _TRN("Edit Annotations"),
        CmdEditAnnotations,
    },
    {
        _TRN("Create Annotation From Selection"),
        (UINT_PTR)menuDefCreateAnnotFromSelection,
    },
    {
        _TRN("Create Annotation &Under Cursor"),
        (UINT_PTR)menuDefCreateAnnotUnderCursor,
    },
    {
        _TRN("Save Annotations to existing PDF"),
        CmdSaveAnnotations,
    },
    {
        _TRN("E&xit Fullscreen"),
        CmdToggleFullscreen, // only seen in full-screen mode
    },
    {
        nullptr,
        0,
    },
};
```

```
    },
    {
        "Remove from favorites",
        CmdFavoriteDel,
    },
    {
        _TRN("Show &Favorites"),
        CmdFavoriteToggle,
    },
    {
        _TRN("Show &Bookmarks"),
        CmdToggleBookmarks,
    },
    {
        _TRN("Show &Toolbar"),
        CmdToggleToolbar,
    },
    {
        _TRN("Show &Scrollbars"),
        CmdToggleScrollbars,
    },
    {
        kMenuSeparator,
        kMenuSeparatorID,
    },
    {
        _TRN("Select Annotation in Editor"),
        CmdSelectAnnotation,
    },
    {
        _TRN("Delete Annotation₩tDel"),
        CmdDeleteAnnotation,
    },
    {
        _TRN("Edit Annotations"),
        CmdEditAnnotations,
    },
    /*{
        _TRN("Create Annotation From Selection"),
        (UINT_PTR)menuDefCreateAnnotFromSelection,
    },*/
    {
        kMenuSeparator,
        kMenuSeparatorID,
    },
    {
        _TRN("&Highlight"),
        CmdCreateAnnotHighlight,
    },
    {
        _TRN("&Underline"),
        CmdCreateAnnotUnderline,
    },
    {
        _TRN("&Strike Out"),
        CmdCreateAnnotStrikeOut,
    },
    {
        _TRN("S&quiggly"),
        CmdCreateAnnotSquiggly,
    },
    {
      _TRN("Text Box"),
      CmdCreateAnnotBBox,
    },
```

			/*{ _TRN("Create Annotation &Under Cursor"), (UINT_PTR)menuDefCreateAnnotUnderCursor, },*/ { kMenuSeparator, kMenuSeparatorID, }, { _TRN("&Free Text"), CmdCreateAnnotFreeText, }, { _TRN("&Text"), CmdCreateAnnotText, }, { _TRN("Circle"), CmdCreateAnnotCircle, }, { _TRN("Square"), CmdCreateAnnotSquare, }, { _TRN("&Stamp"), CmdCreateAnnotStamp, }, { _TRN("&Caret"), CmdCreateAnnotCaret, }, { _TRN("&Paste Clipboard"), CmdCreateAnnotImage, }, { kMenuSeparator, kMenuSeparatorID, }, { _TRN("Save Annotations to existing PDF"), CmdSaveAnnotations, }, { _TRN("E&xit Fullscreen"), CmdToggleFullscreen, // only seen in full-screen mode }, { nullptr, 0, }, };
menu	case CmdCreateAnnotCaret:	case CmdCreateAnnotCaret: case CmdCreateAnnotImage:
Add Text box(BBox) command for disabled list with No Selection	UINT_PTR disableIfNoSelection[] = { CmdCopySelection, CmdTranslateSelectionWithDeepL, CmdTranslateSelectionWithGoogle, CmdSearchSelectionWithBing, CmdSearchSelectionWithGoogle, CmdCreateAnnotHighlight, CmdCreateAnnotSquiggly, CmdCreateAnnotStrikeOut, CmdCreateAnnotUnderline, 0, };	UINT_PTR disableIfNoSelection[] = { CmdCopySelection, CmdTranslateSelectionWithDeepL, CmdTranslateSelectionWithGoogle, CmdSearchSelectionWithBing, CmdSearchSelectionWithGoogle, CmdCreateAnnotHighlight, CmdCreateAnnotSquiggly, CmdCreateAnnotStrikeOut, CmdCreateAnnotUnderline, CmdCreateAnnotRedact, CmdCreateAnnotBBox, 0, };
enable redact, Bbox	**Put the code after the following code** case CmdCreateAnnotStrikeOut:	case CmdCreateAnnotRedact: createdAnnots = MakeAnnotationFromSelection(tab, AnnotationType::Redact); break; case CmdCreateAnnotBBox: createdAnnots = MakeAnnotationFromSelection(tab,

			AnnotationType::BBox); break;
Canvas.cpp	function	before	after
	Just mouse double click on page, then free text annotation appears	static void OnMouseLeftButtonDblClk(MainWindow* win, int x, int y, WPARAM key) { … … …	static void OnMouseLeftButtonDblClk(MainWindow* win, int x, int y, WPARAM key) { OnCreateFreeText(win, x, y); return; … … …
	remove a bitmap which means reloading state	HDC bmpDC = CreateCompatibleDC(hdc); if (!bmpDC) { continue; } SelectObject(bmpDC, gBitmapReloadingCue); int size = DpiScale(win->hwndFrame, 16); int cx = std::min(bounds.dx, 2 * size); int cy = std::min(bounds.dy, 2 * size); int x = bounds.x + bounds.dx - std::min((cx + size) / 2, cx); int y = bounds.y + std::max((cy - size) / 2, 0); int dxDest = std::min(cx, size); int dyDest = std::min(cy, size); StretchBlt(hdc, x, y, dxDest, dyDest, bmpDC, 0, 0, 16, 16, SRCCOPY); DeleteDC(bmpDC);	/*HDC bmpDC = CreateCompatibleDC(hdc); if (!bmpDC) { continue; } SelectObject(bmpDC, gBitmapReloadingCue); int size = DpiScale(win->hwndFrame, 16); int cx = std::min(bounds.dx, 2 * size); int cy = std::min(bounds.dy, 2 * size); int x = bounds.x + bounds.dx - std::min((cx + size) / 2, cx); int y = bounds.y + std::max((cy - size) / 2, 0); int dxDest = std::min(cx, size); int dyDest = std::min(cy, size); StretchBlt(hdc, x, y, dxDest, dyDest, bmpDC, 0, 0, 16, 16, SRCCOPY); DeleteDC(bmpDC);*/
	movable objects	static AnnotationType moveableAnnotations[] = { … … … //AnnotationType::Redact, AnnotationType::Stamp, AnnotationType::Caret,	static AnnotationType moveableAnnotations[] = { … … … //AnnotationType::Redact, //AnnotationType::BBox, AnnotationType::Stamp, AnnotationType::Caret, AnnotationType::Image,
Annotation.h	function	before	after
	1. Bbox class **2. Image class**	enum class AnnotationType { … … … Redact, Stamp, Caret, … … … };	enum class AnnotationType { … … … Redact, BBox, Stamp, Caret, Image, … … … };
Annotation.cpp	function	before	after
	add Bbox and image annotation	// must match the order of enum class AnnotationType static const char* gAnnotNames = … … … "Redact\0" "Stamp\0" "Caret\0"	// must match the order of enum class AnnotationType static const char* gAnnotNames = … … … "Redact\0" "BBox\0" "Stamp\0" "Caret\0" "Image\0"
	add Bbox and image annotation	static const char* gAnnotReadableNames = … … … "Redact\0" "Stamp\0" "Caret\0"	static const char* gAnnotReadableNames = … … … "Redact\0" "BBox\0" "Stamp\0" "Caret\0" "Image\0"
Annot.h	function	before	after
	1. Bbox annot **2. Image annot**	enum pdf_annot_type { … … … PDF_ANNOT_REDACT, PDF_ANNOT_STAMP, PDF_ANNOT_CARET,	enum pdf_annot_type { … … … PDF_ANNOT_REDACT, PDF_ANNOT_BBOX, PDF_ANNOT_STAMP, PDF_ANNOT_CARET, PDF_ANNOT_IMAGE,
Commands.h	function	before	after
	put Bbox and	V(CmdCreateAnnotCaret, "Create Caret Annotation") \	V(CmdCreateAnnotRedact, "Create Redact Annotation") \

	image annots to command list	V(CmdCreateAnnotRedact, "Create Redact Annotation") \	V(CmdCreateAnnotBBox, "Create BBox Annotation") \ V(CmdCreateAnnotCaret, "Create Caret Annotation") \ V(CmdCreateAnnotImage, "Create Image Annotation") \

SumatraPDF.cpp

function	before	after
menu	case CmdCreateAnnotCaret:	case CmdCreateAnnotCaret: case CmdCreateAnnotImage:
enable redact, textbox	// TODO: make it closer to handling in OnWindowContextMenu() case CmdCreateAnnotHighlight: case CmdCreateAnnotSquiggly: case CmdCreateAnnotStrikeOut: case CmdCreateAnnotUnderline: if (win && tab) { auto annots = MakeAnnotationFromSelection(tab, annotType); bool isShift = IsShiftPressed(); openAnnotsInEditWindow(win, annots, isShift); } break;	// TODO: make it closer to handling in OnWindowContextMenu() case CmdCreateAnnotHighlight: case CmdCreateAnnotSquiggly: case CmdCreateAnnotStrikeOut: case CmdCreateAnnotRedact: case CmdCreateAnnotBBox: case CmdCreateAnnotUnderline: if (win && tab) { auto annots = MakeAnnotationFromSelection(tab, annotType); bool isShift = IsShiftPressed(); openAnnotsInEditWindow(win, annots, isShift); } break;