SOP 0010

Build-Ops Form Creation

PURPOSE:

To create clean, standardized forms for technician use and invoicing in Build-Ops.

OVERVIEW:

Build-Ops contains a module called the “Form Builder” which provides the opportunity to integrate some of the nominal data contained within a visit onto an imported PDF. One of the drawbacks of the PDF editor from within this module is the lack of a “snap-to function”. Consequently, all fields applied to the PDF must be drawn freehand. Ultimately, the result from this is human error and irregularities that can be spotted immediately.

To combat this issue, a small program was created using Python and the library pyautogui. This program standardizes the size and placement of the fields on the PDF document.

CREATING THE DOCX:

All forms that may be seen by a customer must be designed on Core standard letterhead found on the office share drive.

- The first section of the form is to be called: “I. PRELIMINARY INFORMATION”
  - The subsequent sections do not have naming restrictions; however, they must be in all capital letters.
- The fillable fields in the “PRELIMINARY INFORMATION” section must be formatted as follows:
  - Space, pipe character, 18 underscores, pipe character and a space.
    - |__________________|
  - This ensures that all forms contain a consistent format and that the form-tracing software can recognize where a field needs to be placed.
- All fields that will contain short strings or numeric values are to be formatted as follows:
  - Space, pipe character, 10 underscores, pipe character and a space.
    - |__________|
- Checkboxes can be made as any non-filled square bullet point if they are identical.

CREATING THE PDF:

Once the form is complete, it should be saved in the FORMS folder of the office share directory, under the relevant department. A PDF should be created, in the same location, with the same name.

BUILD-OPS:

PREREQUISITES.

To access the forms section of Build-Ops, your user account must carry admin privileges.

FORM SET-UP:

- Click the “Core Mechanical IN” tab at the top left of Build-Ops.
- From the drop-down menu, select *forms*.
- Click *Create New Form.*
- The form type will be PDF.
- Give the form a unique and relevant name.
- *Enter admin mode.*
    - *This is done by adding “?isadmin” [without the quotes] to the end of the URL.*
- From here, change the view type.
    - The view type determines where the form is accessible to the technician.

Fields Available	*Job*	*Task*	*Project*	*Property*
Customer Info	*True*	*True*	*True*	*True*
Tech Info	*True*	*True*	*True*	
Date Info	*True*	*True*	*True*	
Asset info	*False*	*True*	*False*	
View Location	*Job Visit*	*Job Visit (if assigned Task)*	*Project Visit*	*Service Agreement*

- Forms designed for specific assets need to be set up as task forms.

PDF IMPORT:

Once the form is set up it, the premade PDF can be imported into the Build-Ops PDF editor.

- Click Import PDF
- Select the PDF document.
- Click the *forms* tab from the menu at the top of the page.

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ADDING FORM FIELDS:

To improve consistency of the fields and the decrease the amount of time and resources needed to create forms, the tool “Form-Field-Tracer-for-Build-Ops” should be used.

The tool can be downloaded here.

This tool is currently only available in Python, so the python interpreter is required, as well as the module pyautogui which is a third-party library.

EXE coming soon.

This tool works best if two screens are present. This tool strictly works off the “main display”.

- Begin by setting the zoom of the webpage to where all fields are in frame, and the window zoomed in as close as possible.
- Take a screenshot of the empty form field using the snipping tool.
    - Start As close as possible to the top left corner of the field, without cropping anything out.
    - Drag to the bottom right corner of the field.
    - The result should look this: |_____|
    - This tool may take some trial and error to get the edges cropped correctly.
    - Copy the image to the clipboard.
- Open the Textbox_Drawer application.
    - Click the “Copy Target image from Clipboard” button.
- On the Build-Ops webpage, draw a small textbox somewhere and take a screenshot of the blue “OK” button using the snipping tool.
- From here click and drag a small textbox somewhere on the screen.
    - This will cause a dialog box to appear with some controls on it.
        - From here take a screenshot of the blue “OK” button.
        - Click the “Save Ok Image from Clipboard” button on the gui.

- Set the Confidence and overshot distances.
    - Confidence is a number between 1 and 100.
        - The higher the confidence, the “pickier” the program is about matching the target photo.
        - If the confidence is set too high, the application will miss fields.
        - If the confidence is set too low, the application will add fields where they are not wanted.
        - A good starting point is 85.
    - Overshoot height and width are the distances (In pixels) the application overshoots the bottom right corner.

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USING THE FORM TOOL:

- Run *textbox_tracer.py*. or textbox_tracer.exe
- drag the Gui onto your second screen then press enter.
- Let your hand off the mouse as the program looks for all instances of the *target.png* on the screen. If it doesn't see it, it will scroll down 150 clicks and look again.
- **To end the program prematurely, slam the cursor into the top right or top left corner of the screen to trigger the failsafe. Trying to just "X" out of the application is very difficult when your mouse is being controlled by the application.**
- If there are multiple sizes of fields on the form, change the picture used as the "*target.png*" and rerun the application.

Authorizing Signature	**Date**

Revision	**Date**
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