# SAT

## Sheet Adjustment Tool

Version 1.0.0
June – 28 – 2022

# About SAT

**SAT**, or Sheet Adjustment Tools, is an **Excel Macro** that structures Worksheets for **Pretty Printing**.

It runs on a user interface upon which it loads pre-existing configuration files that determine the settings to apply.

It helps by adjusting column widths automatically, based on the scale (zoom) provided on the configuration settings and the respective data lengths of each column.

**SAT** will need the help of an additional tool (macro) named "**Header_Unifier**" if certain conditions in the Excel sheet are not met.

# SAT's Purpose

The main purpose of **SAT** is to assist with Annexes A and A-1.

Knowing that the creation of these files consists of a set of repetitive steps, like the adjustment of settings such as margins, columns, scales, etc, **SAT** will take most of the heavy work and automate it.

# SAT's Version

**Version**: Alpha

**What is Alpha?**

The alpha phase of the release cycle is the first phase of software testing.

Alpha software is not thoroughly tested by the developer before it is released to customers.

Alpha software may contain serious errors, and any resulting instability could cause crashes or data loss. Alpha software may not contain all of the features that are planned for the final version. In general, an alpha version or release of a software package intends to do something particular, mostly does so, yet isn't guaranteed to do so fully.

# Installation

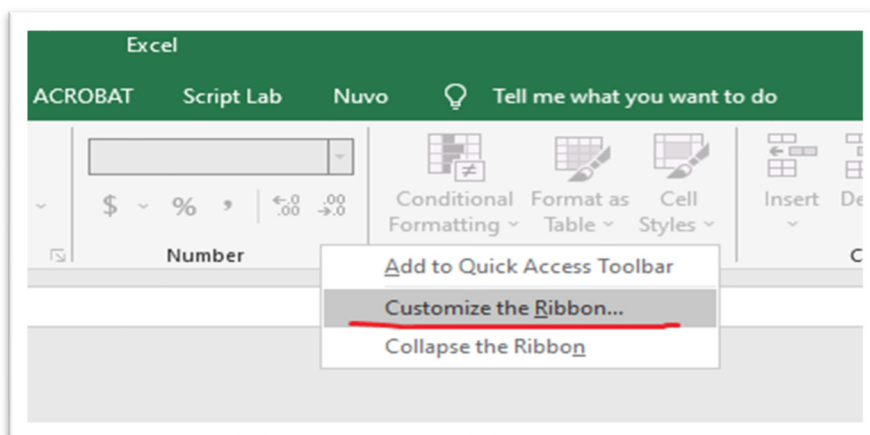Please follow the steps blow to install both macros **SAT** and **Header_Unifier**.

## A. Part 1

a) Download the zip folder "*SAT-Macro.zip*".

b) Unzip the folder and open it.

c) Right click the "*install.ps1*" script and follow instructions.
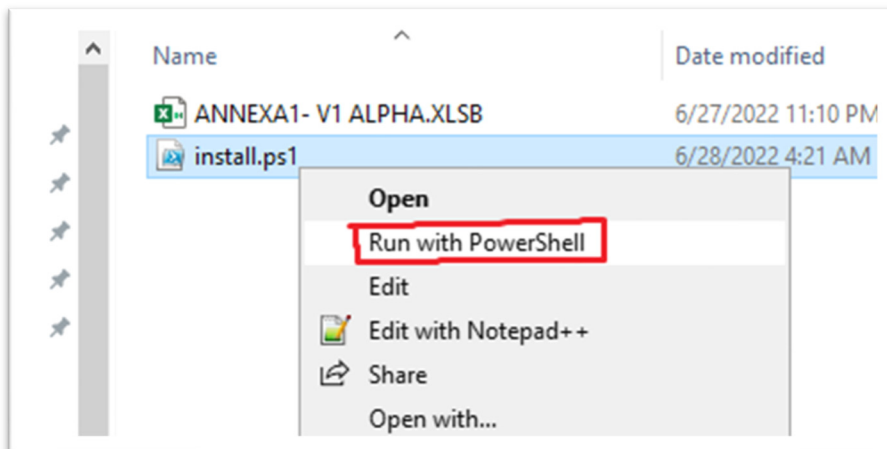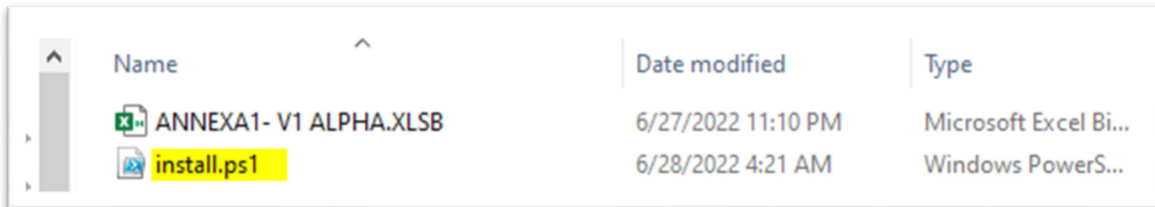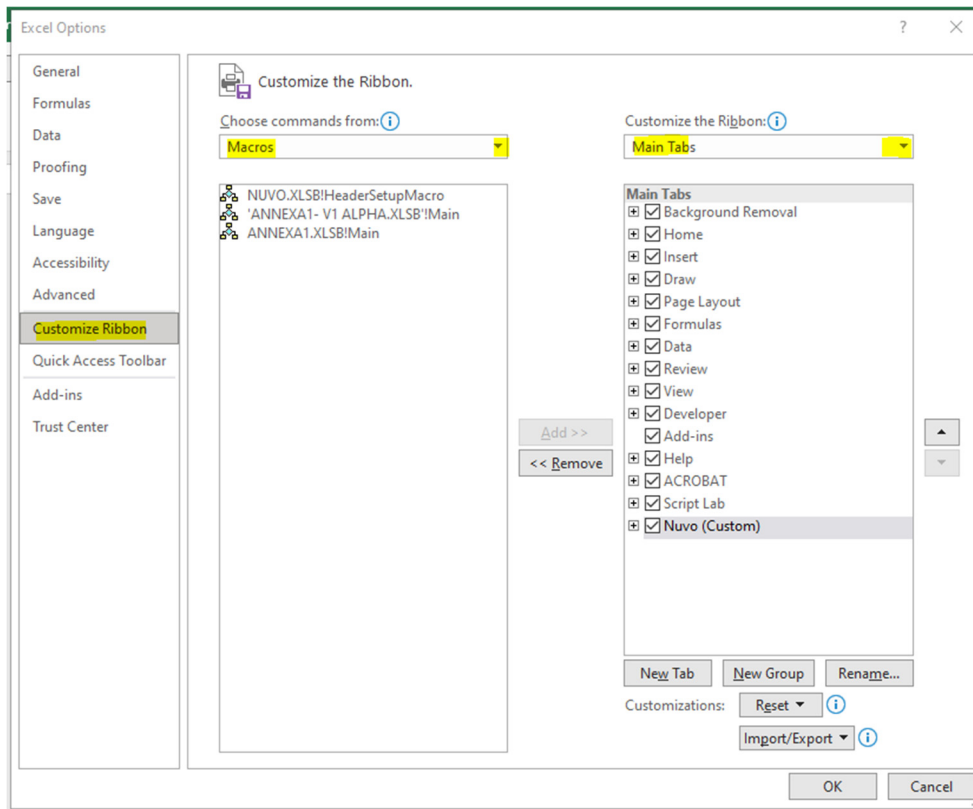




## B. Part 2

a) Open Excel. If already open, close it and reopen it.

b) Anywhere within the Ribbon right-click and press "*Customize the Ribbon...*".

c) Once the "*Excel Options*" window opens, make sure to be on the "*Customize Ribbon*" tab and have the highlighted selected.



d) In the righthand column, select the last option on the list (last main tab, should be ACROBAT for most users) and then click "*New Tab*".

e) Select the "*New Tab*", click "*Rename*" and type "*Nuvo*", then click "*OK*".

f) Select the "*New Group*", click "Rename" and type "*Annex A-1*", then click "*OK*".
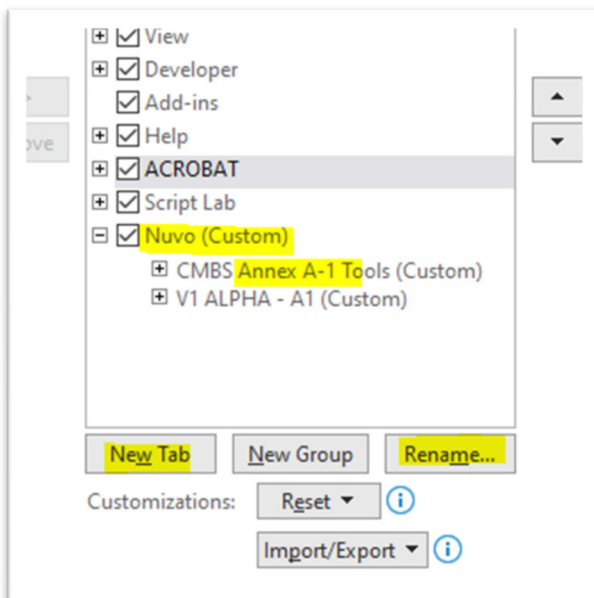
g) Click the newly renamed group, then on the lefthand column select the macros:
   a. *"ANNEXA1- V1 ALPHA"* and click *"Add >>"*.
   b. "HEADER_UNIFIER" and click *"Add >>"*.
h) Then click one macro at a time and click *"Rename"* and type:
   a. *"ANNEXA1- V1 ALPHA" -> "SAT – V1 Alpha".*
   b. *"HEADER_UNIFIER" -> "Header Unifier".*

You can select an icon when renaming each macro to distinguish each tool.
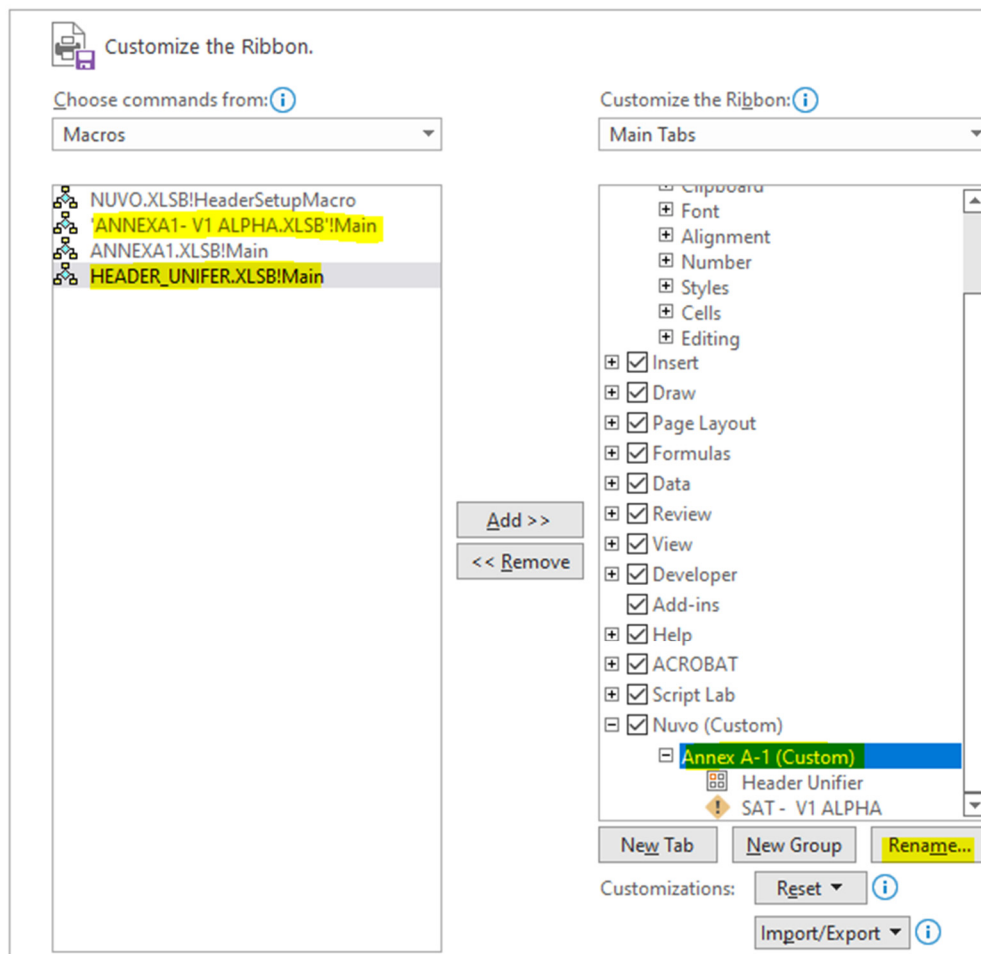


i) Once all of this is done, click the big *"OK"* at the bottom of the window and it will apply the changes to the ribbon. It should look like the image below.
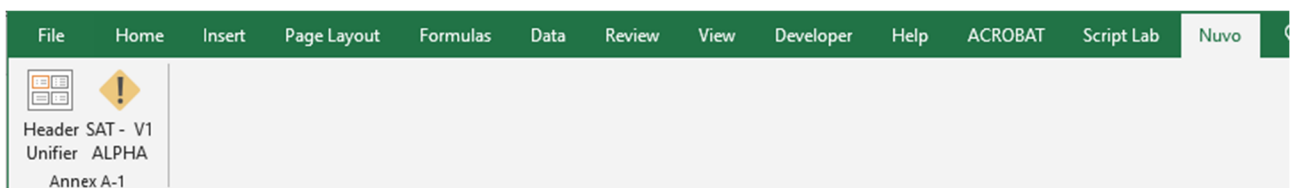


All done, you are ready to use the macros!

# How to Use

To understand our "*How to Use*", we will go over the following sections:

1) A comparison of the steps we are used to doing and the steps that **SAT** will take over.
2) An overview of the steps that **SAT** does not do.
3) And finally, a redefinition of steps and their order.

## 1) Compare:

| User Does | SAT Does |
|---|---|
| ``` Formatting excel files for PDF (1) Set Printer to Adobe PDF (2) Turn on View/Page Break view     View/Unfreeze Panes(1) (3) Set Print Area--make sure all columns and rows are inside the Print Area (4) Page:     (4.0)  Landscape     (4.1)  Adjust Scaling (minimum scaling: 35%)     (4.2)  Page: 8.5 x 11 - Letter     (4.3)  Print Quality: 600 dpi (5) Margins:     (5.1)  Top/Bottom: 0.5     (5.2)  Left/Right: 0.25     (5.3)  Header/Footer: 0.25 (6) Header/Footer:     (6.1)  Header: Optional--Cut and paste header here, if necessary, from Excel sheet     (6.2)  Footer: Insert Letter folios (usually Arial, 10pt)     (6.3)  Uncheck: odd/even pages, diff first page, scale     (6.4)  Check: Align with page margins (7) Sheet tab:     (7.1)  Repeat rows     (7.2)  Repeat columns (8) Print/Page tab:     (8.1)  Print Preview/Show margins:     (8.2)  Adjust (shrink or expand) column widths to fit page (9) Some guidelines:     (9.1)  format footnotes in Word if it is more than a page long ``` | ``` Formatting excel files for PDF ----- (2) Turn on View/Page Break view --- --- --- (4) Page:     (4.0)  Landscape     (4.1)  Adjust Scaling (minimum scaling: 35%)     (4.2)  Page: 8.5 x 11 - Letter     (4.3)  Print Quality: 600 dpi (5)   Margins:     (5.1)  Top/Bottom: 0.5     (5.2)  Left/Right: 0.25     (5.3)  Header/Footer: 0.25     ---   --- --- ---     (6.3)  Uncheck: odd/even pages, diff first page, scale     (6.4)  Check: Align with page margins (7)   Sheet tab:     (7.1)  Repeat rows     (7.2)  Repeat columns (8)   Print/Page tab:     ---     (8.2)  Adjust (shrink or expand) column widths to fit page --- --- ``` |

(1) It will be explained below why this has been marked RED.

## 2) SAT does not do:

As you can see, **SAT** takes care of the majority of the steps. However, the following remain to be done by the user:

```
Formatting Excel files for PDF
(1) Set Printer to Adobe PDF
(2) View/Unfreeze Panes
(3) Set Print Area--make sure all columns and rows are inside the Print Area
(6) Header/Footer:
     (6.1) Header: Optional--Cut and paste header here, if necessary
     (6.2) Footer: Insert Letter folios (usually Arial, 10pt)
(8) Print/Page tab:
     (8.1) Print Preview/Show margins:
(9) Some guidelines:
     (9.1) format footnotes in Word if it is more than a page long
```

## 3) Redefinition of steps:

For **SAT** to able to run correctly, a few of the above remaining steps **MUST** be changed and done first. These are:

```
(2) View/Unfreeze Panes
(6) (6.1) Header: Optional--Cut and paste header here, if necessary, from Excel sheet
```

- (2) View/Unfreeze Panes will be changed to (2) View/Leave Frozen/Freeze Panes.

- "*(6.1) Header:...*" will be reordered and broken down into:

```
(3) Annex Header:
     (3.1) Cut and Paste header into header-form, if necessary
     (3.2) Delete ROWs in which header was located in the Excel sheet, if necessary.
```

So, the final order of the steps to be applied are:

| New – Users Step |
| --- |
| (1) Set Printer to Adobe PDF.<br>(2) View/Leave Frozen/Freeze Panes.<br>(3) Annex Header:<br>    (3.1) Cut and Paste header into header-form, if necessary.<br>    (3.2) Delete ROWs in which header was located in the Excel sheet, if necessary.<br>(4) If needed, run **Header_Unifier** tool.<br>(5) Run **SAT.**<br>(6) Set Print Area--make sure all columns and rows are inside the Print Area.<br>(7) Some guidelines:<br>    (7.1) Footer: Insert Letter folios (usually Arial, 10pt).<br>    (7.2) format footnotes in Word if it is more than a page long. |

To continue, I will explain the meaning of the new steps and how to do them. These steps are from the "*New – User Steps*" list.

```
(2) View/Leave Frozen/Freeze Panes.
(3) Annex Header:
    (3.1) Cut and Paste header into header-form, if necessary.
    (3.2) Delete ROWs in which header was located in the Excel sheet, if necessary.
(4) If needed, run Header_Unifier tool.
(5) Run SAT.
```

**First:**

```
(2) View/Leave Frozen/Freeze Panes.
```

If an Annex A/A-1 comes without frozen panes, we must freeze them.



Like the below:



<u>Why?</u>

**SAT** will look for the frozen panes and from them, it will determine which columns and rows are to be repeated. Based on this it will also determine which columns require dynamic adjustment.

**Second:**

```
(3) Annex Header:
    (3.1) Cut and Paste header into header-form, if necessary.
    (3.2) Delete ROWs in which header was located in the Excel sheet, if necessary.
```

If an Annex A/A-1 has its header like the following:



One must, as stated in step (3.1), move this to the header form.

Then delete, as stated in step (3.2), the rows in which the header was placed, so that the file looks like the following:



Why?

**SAT** will assume that the first, 1<sup>st</sup>, row is the data-header of each column. Based on this, **SAT** calculates the width of the column by the length of the data-header and the length of the data in the column.

**Third:**

```
(4) If needed, run Header_Unifrer tool.
```

If the data-header of an Annex A/A-1 is split into rows (like the following):



We need to unify it, as per below:



As you can see, the rows (in this case 1 through 4) became a single row, row 1. This was done by running the tool(macro) **Header_Unifier**.

<u>Why?</u>

As explained previously, **SAT** thinks/assumes the 1ˢᵗ row to be the data-header of each column.

The **Header_Unifier** looks like:
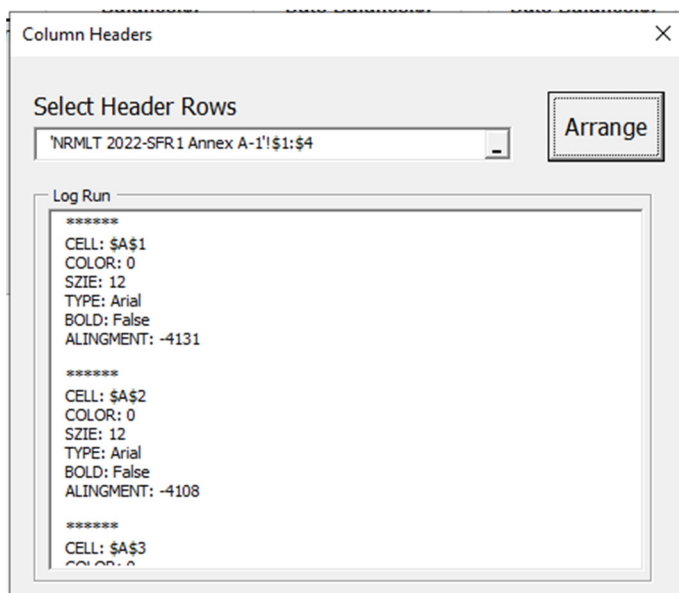


On the file "*Select Header Rows*" you will select the rows that conform the data-header.

Then you will click the action button "*Arrange*".

This will trigger the macro and arrange the rows, as in the above picture.

At the end of the macro, you will see the specs of each cell of the data-header in the "*Log Run*" field.

The macro replicates these specs on the newly modified/created row.

**Fourth:**

> (5) Run **SAT.**

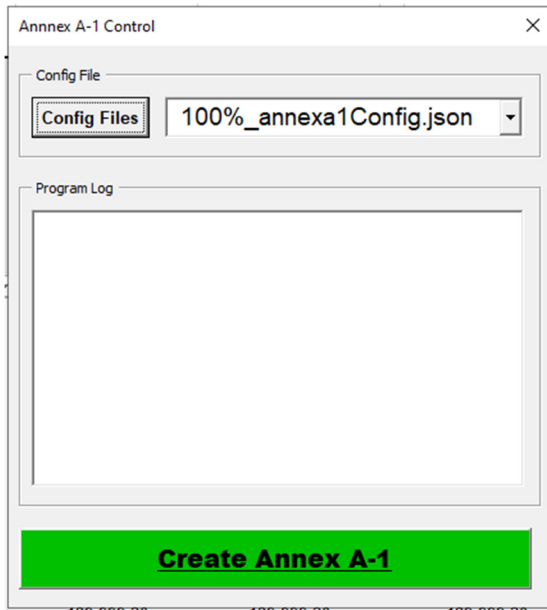**SAT**'s user interface (UI) looks as per below:



Using **SAT** is really simple.

You will first select the config file to run. This is done by clicking the drop-down menu and selecting one of the configuration files provided.

Then you will simply click the big green action button at the bottom of the UI and wait for a prompt box to appear.

This box will indicate when **SAT** has finish running.

Once you click "OK" on the prompt box, **SAT** will display the steps it performed on the "*Program Log*" Field.

Let's looks at a sample:

Here we have selected to run the config file that has a scale (zoom) of 45%. We can also observe the prompt box at the right indicating that **SAT** has finish.
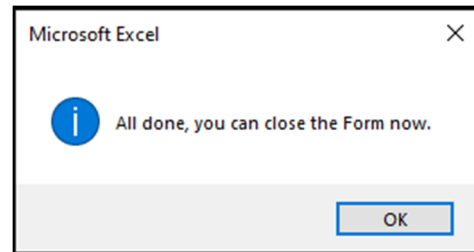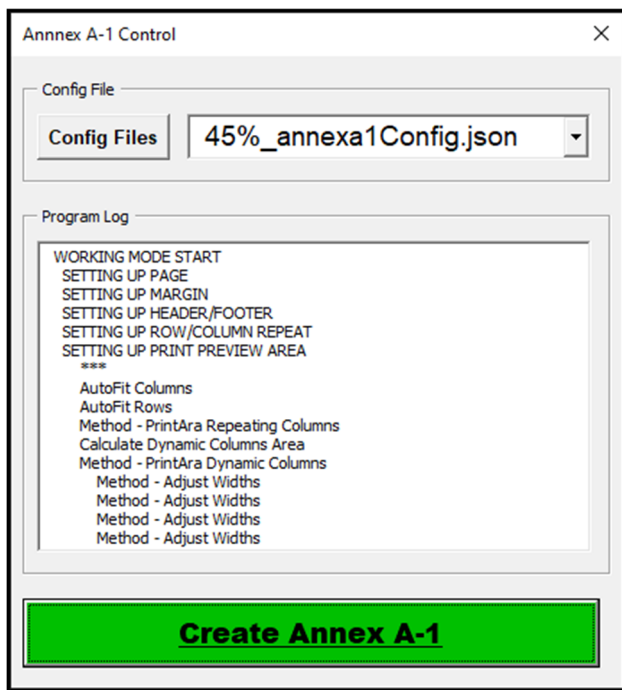
# Your Role!

As mentioned, at the beginning of this document, **SAT** was created to help us. However, it is not completely finished and it can/may contain errors.

However, we are at the stage of having some selected users test it.

Please use **SAT** in an unmodified copy-version Annex A/A-1. In other words, create a copy of the original file provided by the client and use that for testing.

It could be from an old deal or a new deal but it has to be done in an unmodified copy-version.

The idea of this try out is to get **SAT** do its magic in untouched files and to get your feedback, and thoughts on the tool.

# Feedback

Please provide any feedbacks that you may have, using the steps below.

1) Create an email with the following:

   a. Original unmodified copy-version of Annex A/A-1 tested attached.

   b. **SAT** modified copy-version of Annex A/A-1 attached.

   c. The following are suggested questions to describe your experience:

      i. What type of errors did you encounter?
         If you can post the error message or screen shoot would be great.

      ii. What was **SAT/Header_Unifier** expected to do and didn't?

      iii. Did **SAT/Header_Unifier** create more work to do on the file?

      iv. Did certain files work and others not?

      v. Did you have to additional steps to make **SAT/Header_Unifier** work?

      vi. Did **SAT/Header_Unifier** took too long?

      vii. What should be improved in any of the tools?

      viii. What should be added to the tools?

      ix. Please add any thoughts/ideas you have in your feedback!!!!

Once ready, please email me at [jairo.perez@thenuvogroup.com](mailto:jairo.perez@thenuvogroup.com).

# Source Code

If you are interested in reviewing, studying, or apporting to the code base of **SAT**, please let me know and I will provide access to the GitHub account.

Lastly, please find a general overview of the entire system.