



Deliverable Report

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Abstract	This report summarizes the work done on integration Tools and SW prototype tool of the Fresh WP2
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Keyword List	WP2, integration with CAD/CAM Tools Integration tools and SW prototype tool
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1. INTRODUCTION

When the segmentation work is finished, all the data extracted from the digitized document are ready to be exported in CAD environment.

2. EXPORT TOOLS

The export selected options allow testing many different configurations.

Indeed, the grid step, the format choice and the symbols scale coefficient influence the CAD schema aspect.

3. VALIDATION AND CORRECTION TOOLS

At the end of the analysis and recognition processes, the user must be able to control quickly the coherence of the results obtained.

Three main information must be controlled: the text, the symbols and the construction in the CAD folio.

The text:

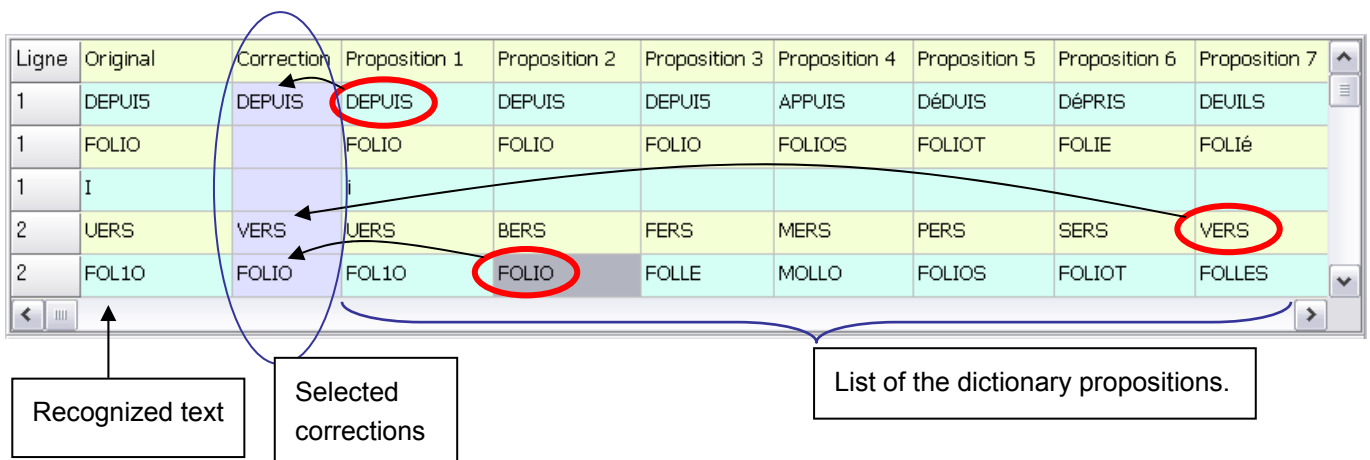
It is readable in list with a local view on the image enabling to confirm a word in its context.

Different functions of sort are available to enable a checkout by groups of nearby similar words, or by areas in the document.

Two types of texts are to be considered in the electrical diagram. The technical terms and expressions that correspond to a lexicon, and the expressions corresponding to markers or numbering are formatted by pre-defined structures.

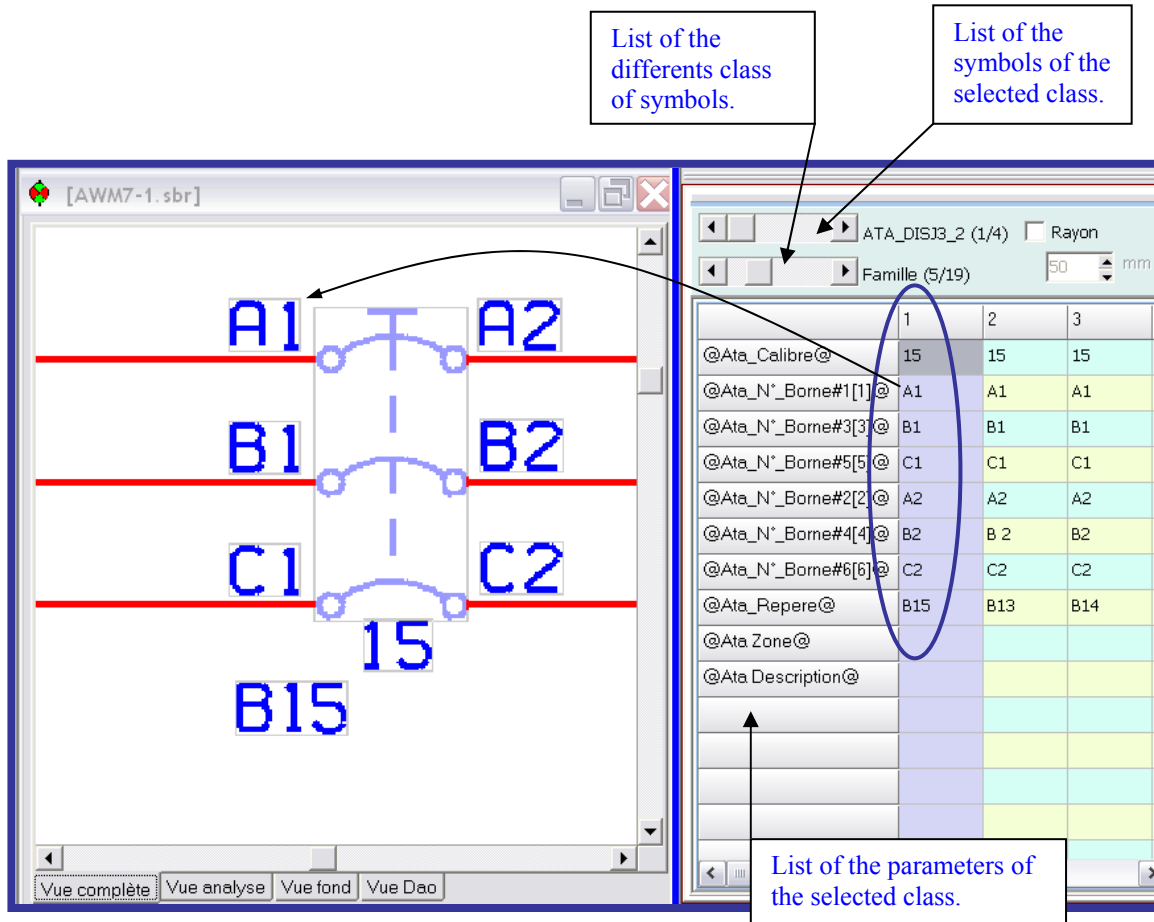
A dictionary using these two notions is available to precise the correction of the text.

Ligne	Original	Correction	Proposition 1	Proposition 2	Proposition 3	Proposition 4	Proposition 5	Proposition 6	Proposition 7
1	DEPUI5	DEPUI5	DEPUI5	DEPUI5	DEPUI5	APPUIS	DéDUI5	DéPRIS	DEUILS
1	FOLIO	FOLIO	FOLIO	FOLIO	FOLIO	FOLIOS	FOLIOT	FOLIE	FOLIé
1	I	I	I	I	I	I	I	I	I
2	UERS	VERS	UERS	BERS	FERS	MERS	PERS	SERS	VERS
2	FOL10	FOLIO	FOL10	FOLIO	FOLLE	MOLLO	FOLIOS	FOLIOT	FOLLES



The symbols:

Two things are to be checked: the type of the symbols recognized, and for each one, the texts linked to the parameters. The correction must be simple and quick, that is why a symbol selected is displayed in its context in the image and the corrections are done by a simple click-drop of the parameters.



The construction into DAO environnement:

Once the CAD schema drawn, the final user validation and correction must be possible. At least to validate the export options choice.

The first level of checking is done with the CAD interface tools. Symbols connexions on wires, symbols parameters correctly affected.

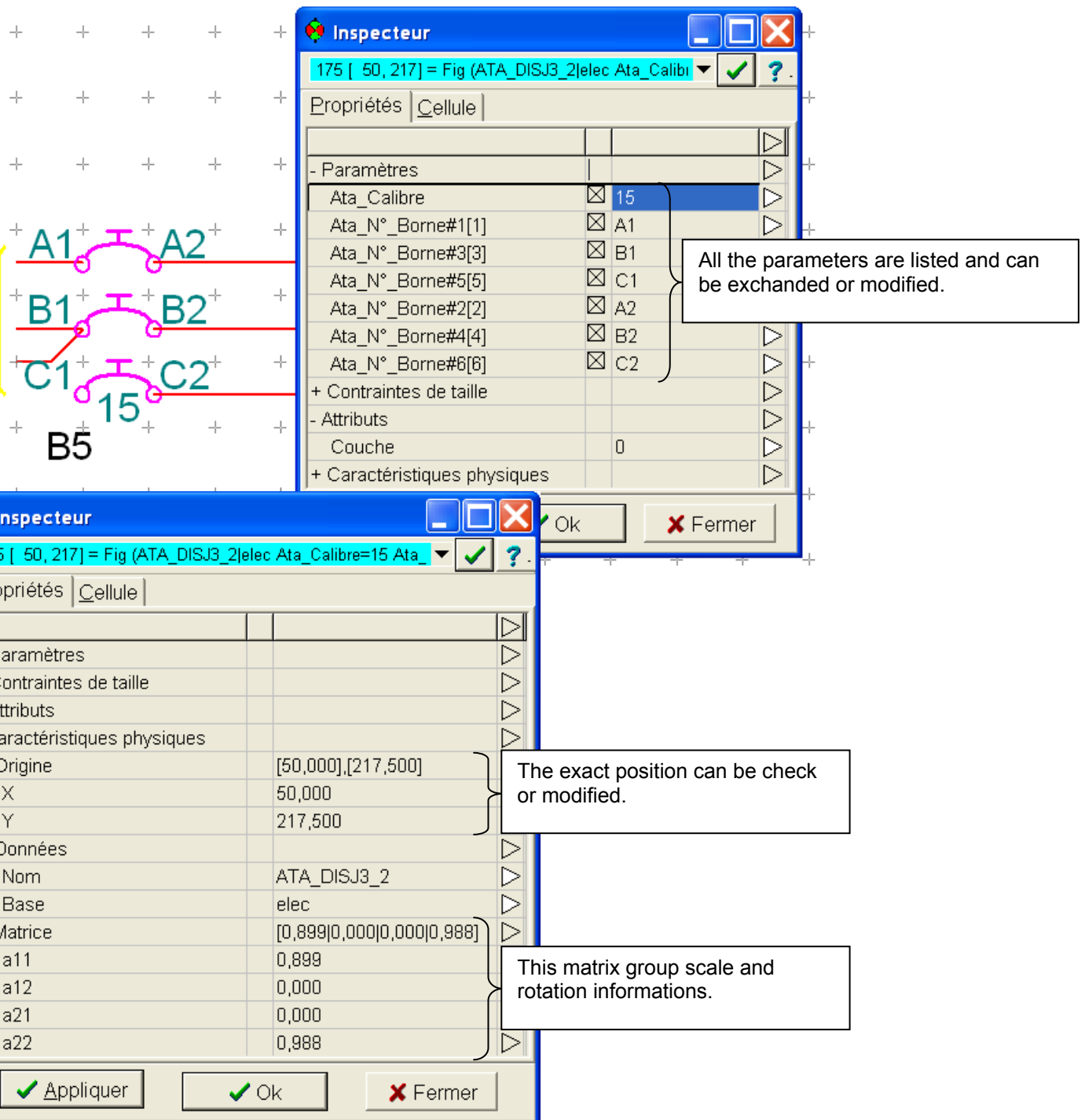
A fast visual inspection could be enough to detect the more obvious errors.

The grid positioning could be easily check, with the cross marks drawn in background.

When an object is selected, it is redrawn in brightening color as all its visuals parameters. This allow to easily verify the correct parameters assignement of a symbol.

3.1. THE OBJECTS INSPECTOR

It's a tool which allows displaying all the characteristics of the selected object. The modifications can be applied, and are immediately visible on the drawing.



The diagram shows a circuit with nodes A1, A2, B1, B2, C1, C2, and B5. A component with value 15 is connected between nodes C1 and C2.

Inspecteur Window 1: Shows properties for the selected component. The 'Paramètres' section is expanded, listing various parameters with checkboxes and values.

Paramètre	État	Valeur
Ata_Calibre	<input checked="" type="checkbox"/>	15
Ata_N°_Borne#1[1]	<input checked="" type="checkbox"/>	A1
Ata_N°_Borne#3[3]	<input checked="" type="checkbox"/>	B1
Ata_N°_Borne#5[5]	<input checked="" type="checkbox"/>	C1
Ata_N°_Borne#2[2]	<input checked="" type="checkbox"/>	A2
Ata_N°_Borne#4[4]	<input checked="" type="checkbox"/>	B2
Ata_N°_Borne#6[6]	<input checked="" type="checkbox"/>	C2

Inspecteur Window 2: Shows properties for the selected component. The 'Caractéristiques physiques' section is expanded, displaying origin coordinates and a transformation matrix.

Propriété	Valeur
Origine	[50,000],[217,500]
X	50,000
Y	217,500
Données	
Nom	ATA_DISJ3_2
Base	elec
Matrice	[0,899 0,000 0,000 0,988]
a11	0,899
a12	0,000
a21	0,000
a22	0,988

Annotations:

- All the parameters are listed and can be exchanged or modified.
- The exact position can be check or modified.
- This matrix group scale and rotation informations.



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4. GRID CALCULATION TOOL

Just before exporting into DAO environnement, the operator can set the X and Y grid values. These values must be correctly estimated. Indeed, an upper value than necessary can affect the same position to differents objects and make superpositions.

5. CONCLUSION

For each main step of this workpackage, interactive tool was provided to allow final user validation and corrections. All these developments are integrated into Algotech software.