Burhan Bukhari

BAPCOMP's Universal Computer System

Head Office:  
34, East Rukneddine  
Al Fayhan 3  
Damascus, Syria

German Office:  
Dr- J- Kizaoui  
Am Tiergarten 1  
6670 St. Ingbert
### SUMMARY

<table>
<thead>
<tr>
<th>Name of the system</th>
<th>BAPCOMP'S UNIVERSAL COMPUTER SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status</td>
<td>Research</td>
</tr>
<tr>
<td>Type of system</td>
<td>MULTILINGUAL</td>
</tr>
<tr>
<td>Translated languages</td>
<td>GERMAN - FRENCH - ENGLISH - SPANISH - RUSSIAN- ARABISH</td>
</tr>
<tr>
<td>Speed of the system</td>
<td>Dependent on the used computer system</td>
</tr>
<tr>
<td>Type of analysis output</td>
<td>BAPCOMP'S SUPRALINGUA</td>
</tr>
<tr>
<td>Dictionaries</td>
<td>BAPCOMP'S NEW COMPILED DICTIONARY</td>
</tr>
<tr>
<td>Implementation language</td>
<td>Independent</td>
</tr>
<tr>
<td>Operating system</td>
<td>Any system usable</td>
</tr>
<tr>
<td>Inventor</td>
<td>Mr. BURHAN BUKHARI</td>
</tr>
</tbody>
</table>
BAPCOMP'S UNIVERSAL COMPUTER SYSTEM

1. TARGET

Based on long termed empirical researches, BAPCOMP started 1980 to develop the "BAPCOMP'S UNIVERSAL COMPUTER SYSTEM" according to "BUKHARI'S THEORY" for the purpose of

- PHONETICAL CHARACTER SET TRANSCRIPTION
- UNIVERSAL TYPESETTING
- MECHANICAL DIRECT TRANSLATION
- MECHANICAL SIMULTANEOUS TRANSLATION (SPEECH SYNTHESIS)

applicable to most of languages in the world.

2. METHOD OF INVESTIGATION

In order to obtain this very complicated and revolutionary objectives resp. target first of all the languages concerned had to be analysed for the purpose to determine their very smallest basic particles being the last origin of written languages and their alphabets. It is obvious, that utilization of computers is more applicable the finer "FRAGMENTATION" of languages could be defined, since then numerous combinations of words are easily obtainable.

To reach this "FRAGMENTATION" resp. the required smallest particles of languages, the answers of many questions regarding the nature of languages concerned, their alphabets, their letters and their functions should be found and logically ordered.

Only for information, some of those questions to be investigated and answered could be mentioned hereinafter as follows:

-97-
- What is LANGUAGE?
- What is WRITING?
- How did WRITING start?
- How to construct resp. to build an ALPHABET for a hitherto UNWRITTEN LANGUAGE?
- Which effects does PRINTING have on WRITING?
- What is LETTER'S FUNCTION?
- Is it possible to deal SIMULTANEOUSLY with DIFFERENT LANGUAGES?
- Is it possible to work out a UNIVERSAL ALPHABET?
- What is the relationship between the LETTER appearing on the KEYBOARD and the LETTER stored within the PHOTOSETTING MACHINE'S MEMORY?
- What is the relationship between the SHAPE of the LETTER and its PHONETIC VALUE?

- Is it possible to work out a UNIVERSAL LANGUAGE?

3. RESULTS

The FIRST RESULT of several years of studies and investigations lead by Mr. BURHAN BUKHARI, the required "BAPCOMP'S UNIVERSAL ALPHABET" was achieved 1984, based on the phonetical reception and its aggregation of usual consonants, special consonants, complex consonants, vowels and syllables for more than forty languages. The validity of this "BAPCOMP'S UNIVERSAL ALPHABET" for further languages are still under development.

The "BAPCOMP'S UNIVERSAL ALPHABET" had been elaborated by Mr. B. BUKHARI under the assistance of a staff of linguists of several nationalities.

What we do mean by such an alphabet is, one that would contain all the diverse characteristics of all the forms of writing in all the languages of the world. And if we borrow the terminology...
of mathematics, we can say:
This alphabet could be the common denominator of all alphabets.

Functionally, this is a transcription alphabet whose role is to reduce the various forms of writing into standardized categories. It is by no means a substitute for any language, its role being to a great extent as transcription as that of shorthand.

The "BAPCOMP'S UNIVERSAL ALPHABET" consists of special "BALNK AND SHADED GEOMETRICAL FIGURES" accompanied with "NUMERICAL SYMBOLS" according to the following scheme:

- Most frequent CONSONANTS in the languages concerned get the geometrical symbol of a SQUARE - BLANK
- SPECIAL CONSONANTS of particular languages get the geometrical symbol of a TRIANGLE - BLANK
- COMPLEX CONSONANTS of particular language get the geometrical symbol of RHOMBUS - BLANK
- VOWELS in the languages concerned get the geometrical symbol of a CIRCLE - BLANK
- DIACRETICA, FIGURES, MATHEMATICAL SYMBOLS...etc get the geometrical symbol of a RECTANGLE - BLANK
- SYLLABLES of particular languages get the corresponding above mentioned geometrical symbols, but in shaded shape

The alphabets of the developed languages had been put in relation with the "BAPCOMP'S UNIVERSAL ALPHABET" in a MATRIX, ordering vertically all letters of each alphabet and horizontally on the same line all similar letters of the alphabets of these languages. (See figure 1).

The languages which have already been studied, cover four groups of languages:

LATIN GROUP: 01 LATIN 02 FRENCH 03 ITALIAN 04 PORTUGUESE
05 SPANISH 06 CATALAN 07 ROMANIAN 08 ENGLISH
09 GERMAN 10 DUTCH 11 SWEDISH 12 NORWEGIAN
13 DANISH 14 ICELANDIC 15 CZECH 16 POLISH
17 FINNISH 18 HUNGARIAN 19 ESPERANTO 20 SEBRO-CROAT
21 TURKISH 22 ALBANIAN 23 WELSH 24 SWAHILI
25 MALTESE 26 INDONESIAN 27 SAMOAN
The INDIAN LANGUAGES are still under development.

The **SECOND RESULT** of these researches and investigations was the construction of the

"BAPCOMP'S UNIVERSAL KEYBOARD"

The **keys** of this keyboard do not carry any more letters but "GEOMETRICAL and NUMERICAL SYMBOLS"; the keyboard has the standard dimensions of usual keyboards. (See figure 2). Accordingly the "BAPCOMP'S UNIVERSAL KEYBOARD" operates with the "BAPCOMP'S UNIVERSAL ALPHABET".

With this keyboard a number of about 1700 symbols per shift can be achieved.

The "BAPCOMP'S UNIVERSAL KEYBOARD" enables the transfer of the "BAPCOMP'S UNIVERSAL ALPHABET" into a standard computer system by using the

"BAPCOMP'S DOUBLE TOUCH SYSTEM"

The "BAPCOMP'S DOUBLE TOUCH SYSTEM" means that two keys must be pressed simultaneously for the input of one letter, diacritic,... ..etc, namely one key for geometrical symbol and one for numerical symbol. (See figure 1).

The **THIRD RESULT** of these researches and investigations was the approval of the practical application of

"BAPCOMP'S UNIVERSAL ALPHABET"
"BAPCOMP'S UNIVERSAL KEYBOARD"
"BAPCOMP'S DOUBLE TOUCH SYSTEM"
based on the elaborated tables for the concerned languages.

This practical approval has easily shown the practicability BUKHARI'S THEORY by

- reproduction of the input symbols into the corresponding alphabet (see figure 3).
- phonetical character set transcription (see figure 4)
- universal typesetting

This phase of BAPCOMP's researches and investigations allows to cover practically all following application fields, i.e.

- libraries
- music houses
- universities
- scientific institutions
- printing companies
- publishing companies
- advertising companies
- trading companies
- communications
- language trading centres
- speech synthesis
- .................
The **FOURTH RESULT** was achieved, after the successful approval of the afore mentioned phase, by finding the

"BAPCOMP'S SUPRALINGUA"

which is the basis of the

"BAPCOMP'S UNIVERSAL MECHANICAL DIRECT TRANSLATION SYSTEM"

The "BAPCOMP'S SUPRALINGUA" had been obtained according to "BUKHARI'S THEORY" by fragmentation the language systems into their smallest components which vary from language to language. The "BAPCOMP'S SUPRALINGUA" considers all additionals and variations used within the concerned languages too.

The afore mentioned fragmentation also applies to language pattern to which the seemingly endless variety of structures exhibited by language can be reduced.

The "BAPCOMP'S SUPRALINGUA" allows to translate any language to any other.

The **FIFTH RESULT** of BAPCOMP'S researches and investigations was achieved by the practical approval no. 1 by using the "BAPCOMP'S SUPRALINGUA" for testing the afore mentioned

"BAPCOMP'S UNIVERSAL MECHANICAL DIRECT TRANSLATION SYSTEM"

This first implementation test was made for two LATIN languages namely, ENGLISH - FRENCH and FRENCH - ENGLISH using a PERSONAL COMPUTER with compact floppy disc.

The data for this test consist of three verbs, namely, WRITE - BRING - READ, resp. ECRIVER - APPORTER - LIRE taking into consideration all grammatical combinations with all personal pronouns.

The current software is a FIRST ATTEMPT for automatic translation.

Therefore, the program requires some extra pieces of information to resolve morpho-syntactic ambiguity of the verbs.

The tenses are identified by specific numbers pointing out the tense implication for the target languages.
Example: read - infinitive
Read1 - present form
Read2 - past form
Read3 - past participle

Example for the FRENCH equivalent of the ENGLISH tenses:
Il lit 1 - present simple
Il lit 2 - present continuous
Il lit 3 - present perfect continuous

Consequently 168 combinations can be obtained by this very simple program for each language. Some of those combinations are shown in figure 5.

Since the afore mentioned combinations of sentences were not sufficient enough in order to judge the practicability of the "BAPCOMP'S UNIVERSAL MECHANICAL DIRECT TRANSLATION SYSTEM" another software program no. 2 had been prepared which enables us to obtain about 50,000 combinations of sentences for each language, ENGLISH - FRENCH resp. FRENCH - ENGLISH.

The program no. 2 needs some special information as follows:

1. VERBS : READ - WRITE - BRING, resp. LIRE - ECRIVER - APPORTER

2. NOUNS : BOOK - LETTER - ARTICLE - REPORT - STORY resp.
            LIVRE- LETTRE - ARTICLE - RAPPORT- HISTOIRE
            in singular and pluriel form

             UN- UNE- DES - LE - LA - LES

                          MA - MON - MES - TON - TA - TES
                          SA - SON - SES - NOTRE - NOS - VOTRE
                          VOS - LEUR - LEURS
5. SPECIAL INFORMATION:

<table>
<thead>
<tr>
<th>Verb</th>
<th>English Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>READ</td>
<td>infinitive, present</td>
</tr>
<tr>
<td>READ2</td>
<td>past and past participle</td>
</tr>
<tr>
<td>YOU</td>
<td>2nd person singular</td>
</tr>
<tr>
<td>YOU2</td>
<td>2nd person plural</td>
</tr>
<tr>
<td>THEY</td>
<td>masculine</td>
</tr>
<tr>
<td>THEY2</td>
<td>feminine</td>
</tr>
</tbody>
</table>

for the FRENCH equivalents:

<table>
<thead>
<tr>
<th>Verb</th>
<th>French Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>IL LIT</td>
<td>present simple</td>
</tr>
<tr>
<td>IL LIT 2</td>
<td>present continuous</td>
</tr>
<tr>
<td>IL LIT 3</td>
<td>present perfect continuous</td>
</tr>
<tr>
<td>IL A LU</td>
<td>simple past</td>
</tr>
<tr>
<td>IL A LU 2</td>
<td>past perfect</td>
</tr>
</tbody>
</table>

Some of these combinations are shown in figure 6.

BAPCOMP is just preparing the implementation no. 3 taking six languages into account, namely

"ENGLISH - FRENCH - GERMAN - SPANISH - RUSSIAN - ARABIC"

This software installed on an IBM PC shall enable us to obtain about 20 mio combinations resp. sentences. The user shall not give any extra information with those words, which are ambiguous, since the program itself has to find the word required.

The result of the software program no. 3 shall be demonstrated at the conference organized by IAI/EUROTRA-D.

4. SUMMARY

Based on BUKHARI'S THEORY, BAPCOMP could work out within the last six years under the assistance of a staff of linguists of several nationalities all basic elements and programmes needed for the "BAPCOMP'S UNIVERSAL COMPUTER SYSTEM"

for phonetical character set transkription and mechanical direct translation which are:

"BAPCOMP'S UNIVERSAL ALPHABET"
"BAPCOMP'S UNIVERSAL KEYBOARD"
"BAPCOMP'S SUPRALINGUA"
**FIGURE 1: SAMPLES OF BAPCOMP'S ALPHABET-MATRIX BASED ON BUKHARI'S THEORY FOR SEVERAL LATIN LANGUAGES, ARABIC, HEBREW, AND AMHARIC**

<table>
<thead>
<tr>
<th>Computer Code</th>
<th>Phonetic Symbol</th>
<th>Latin</th>
<th>French</th>
<th>Italian</th>
<th>Spanish</th>
<th>Portuguese</th>
<th>Catalan</th>
<th>Romanian</th>
<th>English</th>
<th>German</th>
<th>Dutch</th>
<th>Swedish</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
</tr>
<tr>
<td>2</td>
<td>A</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
</tr>
<tr>
<td>3</td>
<td>E</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
<td>Ee</td>
</tr>
<tr>
<td>4</td>
<td>U</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
<td>Uu</td>
</tr>
<tr>
<td>5</td>
<td>O</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
<td>Oo</td>
</tr>
<tr>
<td>6</td>
<td>A</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
<td>Aa</td>
</tr>
</tbody>
</table>

**ARABIC**

<table>
<thead>
<tr>
<th>Computer Code</th>
<th>Phonetic Symbol</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
<th>Arabic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>b</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
<td>ب</td>
</tr>
<tr>
<td>2</td>
<td>p</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
<td>پ</td>
</tr>
<tr>
<td>3</td>
<td>d</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
<td>د</td>
</tr>
<tr>
<td>4</td>
<td>t</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
<td>ت</td>
</tr>
<tr>
<td>5</td>
<td>f</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
<td>ف</td>
</tr>
<tr>
<td>6</td>
<td>v</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
<td>غ</td>
</tr>
</tbody>
</table>

**HEBREW**

<table>
<thead>
<tr>
<th>Computer Code</th>
<th>Phonetic Symbol</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
<th>Hebrew</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>b</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
</tr>
<tr>
<td>2</td>
<td>p</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
</tr>
<tr>
<td>3</td>
<td>d</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
</tr>
<tr>
<td>4</td>
<td>t</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
</tr>
<tr>
<td>5</td>
<td>f</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
</tr>
<tr>
<td>6</td>
<td>v</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
</tr>
</tbody>
</table>

**AMHARIC**

<table>
<thead>
<tr>
<th>Computer Code</th>
<th>Phonetic Symbol</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
<th>Amharic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>b</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
<td>ב</td>
</tr>
<tr>
<td>2</td>
<td>p</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
</tr>
<tr>
<td>3</td>
<td>d</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
<td>ד</td>
</tr>
<tr>
<td>4</td>
<td>t</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
<td>ת</td>
</tr>
<tr>
<td>5</td>
<td>f</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
<td>פ</td>
</tr>
<tr>
<td>6</td>
<td>v</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
<td>ג</td>
</tr>
</tbody>
</table>

-A1-

-105-
FIGURE 3: REPRODUCTION OF THE INPUT SYMBOLS INTO THE CORRESPONDING ALPHABETS BY USING RAPCOMP'S UNIVERSAL KEYBOARD

LATIN LANGUAGES

TAMIL - LANGUAGE

-A3-

-107-
FIGURE 4: PHONETICAL CHARACTER SET TRANSCRIPTION
FROM LATIN SPELL LANGUAGES TO RUSSIAN
BY USING RAPCOMP'S UNIVERSAL KEYBOARD

Bukhari phonetic keyboard†
Set of words in different languages demonstrating the †
flexibility of the stored character set. †

leô --- leão --- löwe --- lôve --- oroszlân †
Monday --- Montag --- dimanche --- domenica --- domingo †
†

Букхари пхонети кэйборд†
Лэт оф ордс ин дифферэнт лангвэйс демонстратэнг тхэ †
флэумбилитий оф тхэ сторэд хэра тэр сэт †
†

лэ о лё о лий э лувэ оросэл н †
Кондай Контаг диман хэ домэни а доминго †

-A4-

-108-
A. ENGLISH - FRENCH

- - - - - - - - - - - - -

? he brings
il apporte
elle apporte
?
? i was bringing
je apportais
you were bringing
tu apportais
he was bringing
il apportait
she was bringing
elle apportait
we were bringing
nous apportions
they were bringing
ils apportaient
?

? i wrote
je ecris
you wrote
tu ecris
he wrote
il ecrivit
she wrote
elle ecrivit
we wrote
nous ecrivions
they wrote
ils ecrivent
?

? i read
je lis
you read
tu lis
he read
il a lu
she read
elle a lu
we read
nous avons lu
they read
ils ont lu
?

? i had written
je avais ecrit
you had written
tu avais ecris
he had written
il avait ecris
she had written
elle avait ecris
we had written
nous avions ecris
they had written
ils avaient ecris
?

? i had read
je avais lu
you had read
tu avais lu
he had read
il avait lu
she had read
elle avait lu
we had read
nous avions lu
they had read
ils avaient lu
?

B. FRENCH - ENGLISH

- - - - - - - - - - - - -

? je lisais 1
i was reading
? tu lisais 1
you were reading
? il lisait 1
he was reading
? elle lisait 1
she was reading
? nous lisions 1
we were reading
? ils lisaien 1
they were reading
? elles lisaien 1
they were reading?

? je lis 1
i read
? tu lis 1
you read
? il lit 1
he reads
? elle lit 1
she reads
? nous lisons 1
we read
? ils lisent 1
they read
? elles lisent 1
they read
?

? je ai apporte 1
i brought
? tu as apporte 1
you brought
? il a porté 1
he brought
? elle a apporte 1
she brought
? nous avons apporte 1
we brought
? ils ont apporte 1
they brought
? elles ont apporte 1
they brought
?

? je lis 3
i have been reading
? tu lis 3
you have been reading
? il lit 3
he has been reading
? elle lit 3
she has been reading
? nous lisons 3
we have been reading
? ils lisent 3
they have been reading
? elles lisent 3
they have been reading
?

? je avais lu
i had read
? tu avais lu
you had read
? il avait lu
he had read
? elle avait lu
she had read
? nous avions lu
we had read
? ils avaient lu
they had read
? elles avaient lu
they had read

-109-
FIGURE 6A: BAPCOMP'S UNIVERSAL MECHANICAL DIRECT
TRANSLATION SYSTEM BY USING THE
BAPCOMP'S SUPRALINGUA BASED ON
BUKHARI'S THEORY
Program no. 2

ENGLISH - FRENCH

i read, her books
you read their letters
he reads his story
we read articles
they read reports
we bring the books
we are bringing the letters
they had been bringing a report
we shall write stories
they will be bringing the books
she does not write a book
i am not reading his report
we read articles
i did not write her book
i had not been reading a book
i do not read letters
they had brought a book
you2 read their letters
they2 read reports

je lis ses livres
tu lis leurs lettres
il lit son histoire
nous lisons des articles
ils lisent des rapports
nous apportons les livres
nous apportons les lettres
ils apportaient un rapport
nous écririons des histoires
ils apporteront les livres
elle n' écrit pas un livre
je ne lis pas son rapport
nous lisons des articles
je n' ai pas écrit son livre
je ne lisais pas un livre
je ne lis pas des lettres
ils avaient apporte un livre
vous lisez leurs lettres
elles lisent des rapports

-A6-

-110-
FIGURE 6B: BAPCOMP'S UNIVERSAL MECHANICAL DIRECT TRANSLATION SYSTEM BY USING THE BAPCOMP'S SUPRALINGUA BASED ON BUKHARI'S THEORY
Program no. 2

FRENCH - ENGLISH

je lis une lettre
i read a letter
elle lit son histoire
she reads his story
nous lisons des articles
we read articles
elles lisent des livres
they read books
j' écris la lettre
i write the letter
j' avais apporte des rapports
i had brought reports
elle a lu un livre
she read a book
il lira une lettre
he will read a letter
elle aura lu des articles
she will have read articles
nous ne lisons pas une lettre
we do not read a letter
elle n' avait pas lu un livre
she had not read a book
il ne lira pas une lettre
he will not read a letter
elle n' aura pas lu un livre
she will not have read a book
elle lit un livre 2
she is reading a book
elle lit un livre 3
she was reading a letter
elle lisait une lettre
she had been reading a letter
elle lisait une lettre 2
elle lira un livre 2
elle lira un livre 3
elle ne lira pas un livre 2
she will be reading a book
je ne lirai pas un livre
she will have been reading a book
je ne lirai pas un livre 3
she will not be reading a book
i shall not read a book
i shall not have been reading a book