

Proposal to Encode Diwani Siyaq Numbers in Unicode

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1 Introduction

This is a proposal to encode Diwani Siyaq Numbers in the Unicode standard. It draws upon information originally presented in the following documents, which referred to the proposed block using the designation ‘Diwani Siyaq Numbers’, and it supersedes those documents:

- L2/07-414 “Proposal to Encode Siyaq Numerals”
- L2/09-140 “Diwani Numerals: Towards a Model for Encoding Numerals of the Siyaq Systems”
- L2/11-269 “Preliminary Proposal to Encode Diwani Siyaq Numbers in the UCS”

The major changes from earlier versions are:

- Inclusion of primary sources with transliterations of numbers
- New analysis of glyphic variants and alternate forms
- Addition of alternate forms for various units
- Enhancements to the glyphs of several numbers

Proposals to encode characters of the other three Siyaq systems have been submitted. These following documents contain information on the typology of the numbers and the notation system, and explain the necessity for encoding independent blocks for the four Siyaq systems:

- L2/15-072R2 “Proposal to Encode Ottoman Siyaq Numbers in Unicode”
- L2/15-121R2 “Proposal to Encode Indic Siyaq Numbers in Unicode”
- L2/15-122 “Proposal to Encode Persian Siyaq Numbers in Unicode”

2 Script Details

Block name The name ‘Diwani Siyaq Numbers’ is assigned to the block. This name reflects the types of documents in which these numbers were used.

Character repertoire The proposed repertoire contains 57 characters. It includes alternate forms of numbers that have distinctive shapes. All characters are attested in the available sources, from which several specimens are included here as figures.

Representative glyphs Diwani Siyaq Numbers are attested in sources from the early 10th through 14th centuries. Their forms are quite regular across the available sources. The representative glyphs used here were produced by the proposal author. They are based upon the printed forms used in *Exposé des signes de numération usités chez les peuples orientaux anciens et modernes* by Antoine Paulin Pihan (Paris: L'imprimerie impériale, 1860), specimens of which are shown in figures 12 and 13. These glyphs have been modified as necessary in order to reflect actual usage in the available sources and new glyphs have been created for numbers not illustrated by Pihan.

Structure Diwani Siyaq Numbers represent units of a decimal positional system. The notation system is additive, that is, the value of a number is the sum of the values of the numerals that constitute it. There is no character for zero; it is inherently represented in the distinct numerals for the various decimal orders. There are numbers for the primary units, tens, hundreds, thousands, and ten thousands. Numbers of higher orders are represented using sequences of these characters.

Directionality Diwani Siyaq Numbers are written right-to-left in the regular Arabic manner.

Ordering The ordering of Diwani Siyaq Numbers reflects the method of expressing numbers in Arabic. The largest number occurs first and smaller units follow in sequential order. Compound numbers involving the tens and primary units are written transposed, such that the latter is placed before the former.

3 Characters Proposed

3.1 Primary numbers

The following 9 characters are used for representing primary numbers:

١	DIWANI SIYAQ NUMBER ONE
٢	DIWANI SIYAQ NUMBER TWO
٣	DIWANI SIYAQ NUMBER THREE
٤	DIWANI SIYAQ NUMBER FOUR
٥	DIWANI SIYAQ NUMBER FIVE
٦	DIWANI SIYAQ NUMBER SIX
٧	DIWANI SIYAQ NUMBER SEVEN
٨	DIWANI SIYAQ NUMBER EIGHT
٩	DIWANI SIYAQ NUMBER NINE

3.2 Alternate forms of the primary numbers

The following 8 characters are included in the repertoire:

لا	DIWANI SIYAQ NUMBER ALTERNATE THREE
لعر	DIWANI SIYAQ NUMBER ALTERNATE FOUR
ح	DIWANI SIYAQ NUMBER ALTERNATE FIVE
ر	DIWANI SIYAQ NUMBER ALTERNATE SIX
معر	DIWANI SIYAQ NUMBER ALTERNATE SEVEN
ر	DIWANI SIYAQ NUMBER ALTERNATE EIGHT
نعر	DIWANI SIYAQ NUMBER ALTERNATE NINE

These alternate forms are not glyphic variants, but are used in place of the regular forms in compounds involving the tens and ten thousands (see section 3.10):

These forms are produced by removing the left ascending terminal of the regular form. The exception is ALTERNATE THREE, which is a secondary abbreviation of Arabic ثلاثة *ṭalāṭa* “three”. A comparison of the regular and alternate forms of the primary numbers are shown below:

	1	2	3	4	5	6	7	8	9
Regular	ا	لا	٤	لعا	حا	را	معا	رها	نعا
Alternate	—	—	لا	لعر	ح	ر	معر	ر	نعر

3.3 Tens

The following 9 characters are used for representing the tens:

عا	DIWANI SIYAQ NUMBER TEN
ع	DIWANI SIYAQ NUMBER TWENTY
ع	DIWANI SIYAQ NUMBER THIRTY
لعا	DIWANI SIYAQ NUMBER FORTY
حا	DIWANI SIYAQ NUMBER FIFTY
را	DIWANI SIYAQ NUMBER SIXTY
معا	DIWANI SIYAQ NUMBER SEVENTY
رها	DIWANI SIYAQ NUMBER EIGHTY
نعا	DIWANI SIYAQ NUMBER NINETY

3.4 Alternate form of ten

The following character is included in the repertoire:

٩ DIWANI SIYAQ NUMBER ALTERNATE TEN

The ٩ ALTERNATE TEN is shown in figure 13. It is included in the proposed repertoire because of its distinctive form.

3.5 Hundreds

The following 9 characters are used for representing the hundreds:

١٠٠	DIWANI SIYAQ NUMBER ONE HUNDRED
٢٠٠	DIWANI SIYAQ NUMBER TWO HUNDRED
٣٠٠	DIWANI SIYAQ NUMBER THREE HUNDRED
٤٠٠	DIWANI SIYAQ NUMBER FOUR HUNDRED
٥٠٠	DIWANI SIYAQ NUMBER FIVE HUNDRED
٦٠٠	DIWANI SIYAQ NUMBER SIX HUNDRED
٧٠٠	DIWANI SIYAQ NUMBER SEVEN HUNDRED
٨٠٠	DIWANI SIYAQ NUMBER EIGHT HUNDRED
٩٠٠	DIWANI SIYAQ NUMBER NINE HUNDRED

3.6 Alternate forms of the hundreds

The following characters are included in the repertoire:

٣٠٠٠	DIWANI SIYAQ NUMBER ALTERNATE THREE HUNDRED
٤٠٠٠	DIWANI SIYAQ NUMBER ALTERNATE FOUR HUNDRED
٧٠٠٠	DIWANI SIYAQ NUMBER ALTERNATE SEVEN HUNDRED

The ٣٠٠٠ ALTERNATE THREE HUNDRED is shown as a variant of ٣٠٠ THREE HUNDRED by Pihan in figure 13. This form is not shown in the available primary sources.

The ٤٠٠٠ ALTERNATE FOUR HUNDRED occurs as a variant of ٤٠٠ FOUR HUNDRED in Abbasid and Ilkhanate sources. It is shown in figure 5 (ie. 492,434, in figure 9 (ie. 176,400). 10 (ie. 2,412,900).

The ٧٠٠٠ ALTERNATE SEVEN HUNDRED is occurs as a variant of ٧٠٠ SEVEN HUNDRED in the Ilkhanate source in figure 8 (ie. in 338,700).

These are proposed for encoding on account of their distinctive shapes.

3.7 Thousands

The following 9 characters are used for representing the thousands:

١٠٠٠	DIWANI SIYAQ NUMBER ONE THOUSAND
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الى	DIWANI SIYAQ NUMBER TWO THOUSAND
سالى	DIWANI SIYAQ NUMBER THREE THOUSAND
لعالى	DIWANI SIYAQ NUMBER FOUR THOUSAND
حالى	DIWANI SIYAQ NUMBER FIVE THOUSAND
سالى	DIWANI SIYAQ NUMBER SIX THOUSAND
بعالى	DIWANI SIYAQ NUMBER SEVEN THOUSAND
هالى	DIWANI SIYAQ NUMBER EIGHT THOUSAND
نعالى	DIWANI SIYAQ NUMBER NINE THOUSAND

Figures 11 and 13 show **الى** as a variant form of **الى** ONE THOUSAND. It is not proposed for encoding. It is considered a glyphic variant because of its close resemblance to the representative form.

3.8 Ten Thousands

The following 9 characters are used for representing the ten thousands:

عالى	DIWANI SIYAQ NUMBER TEN THOUSAND
علا	DIWANI SIYAQ NUMBER TWENTY THOUSAND
ملا	DIWANI SIYAQ NUMBER THIRTY THOUSAND
لعالى	DIWANI SIYAQ NUMBER FORTY THOUSAND
حلا	DIWANI SIYAQ NUMBER FIFTY THOUSAND
سلا	DIWANI SIYAQ NUMBER SIXTY THOUSAND
بعلا	DIWANI SIYAQ NUMBER SEVENTY THOUSAND
سلا	DIWANI SIYAQ NUMBER EIGHTY THOUSAND
نعلا	DIWANI SIYAQ NUMBER NINETY THOUSAND

3.9 Alternate form of twenty thousand

The following character is included in the repertoire:

عالى	DIWANI SIYAQ NUMBER ALTERNATE TWENTY HUNDRED
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Figure 7 shows the use of the forms **علا** and **عالى** for expressing 20,000. The first is the representative form for TWENTY THOUSAND. The second is an alternate whose shape is based upon that for the thousands, similar to **عالى** TEN THOUSAND. Another contrastive usage occurs again in figure 10 (ie. compare 22,600 and 25,200). This form is proposed for encoding on account of its distinctive shape and concurrent usage with the the regular **عالى**.

3.10 Orthography

The proposed method for representing Diwani Siyaq Numbers in encoded text is described below. The examples contain three columns: the left is the numeric value; the center is the Diwani Siyaq representation in the regular right to left orientation; the right is the sequence of proposed Unicode characters that would be used for producing the numerical notation in encoded text. The order of the characters in the Unicode sequence (right column) is left to right and indicates the order of input for the characters, ie. the left-most character is the first to be input.

5	حا	<حا FIVE>
50	حا ¹	<حا ¹ FIFTY>
55	حا ¹ ح	<ح ALTERNATE FIVE, حا ¹ FIFTY>
505	حا ¹ حا	<حا ¹ FIVE HUNDRED, حا FIVE>
510	حا ¹ عا	<حا ¹ FIVE HUNDRED, عا TEN>
515	حا ¹ ح عا	<حا ¹ FIVE HUNDRED, ح ALTERNATE FIVE, عا TEN>
5,005	حا ¹ حا ¹	<حا ¹ FIVE THOUSAND, حا ¹ FIVE>
5,500	حا ¹ حا	<حا ¹ FIVE THOUSAND, حا FIVE HUNDRED>
50,000	حلا	<حلا FIFTY THOUSAND>
50,005	حلا حا	<حلا FIFTY THOUSAND, حا FIVE>
50,550	حلا حا ¹ حا	<حلا FIFTY THOUSAND, حا ¹ FIVE HUNDRED, حا ¹ FIFTY>
55,000	ح حلا	<ح ALTERNATE FIVE, حلا FIFTY THOUSAND>
55,005	ح حلا حا	<ح ALTERNATE FIVE, حلا FIFTY THOUSAND, حا FIVE>
500,000	حا ¹ حا ¹ حا	<حا ¹ FIVE HUNDRED, حا ¹ ONE THOUSAND, حا ¹ FIVE THOUSAND, حا ¹ FIVE HUNDRED, حا ¹ FIVE>
505,505	حا ¹ حا ¹ حا ¹ حا	<حا ¹ FIVE HUNDRED, حا ¹ ONE THOUSAND, حا ¹ FIVE THOUSAND, حا ¹ FIVE HUNDRED, حا ¹ FIVE>
550,000	حا ¹ حلا	<حا ¹ FIVE HUNDRED, حلا FIFTY THOUSAND>
555,555	حا ¹ ح حلا حا ¹ حا ¹	<حا ¹ FIVE HUNDRED, ح ALTERNATE FIVE, حلا FIFTY THOUSAND, حا ¹ FIVE HUNDRED, ح ALTERNATE FIVE, حا ¹ FIFTY>

Compound numbers of primary units Compound numbers involving the primary units and the tens, ten thousands, and hundred thousands units are written transposed with the primary unit placed before the larger number. Compounds involving 3–9 are written using the alternate forms of the primary numbers. Below are representations of 11–19. Compounds from 21–99 are written according to the same pattern.

11	اعا	<ا ONE, عا TEN>
12	لاعا	<لا TWO, عا TEN>
13	للاعا	<للا ALTERNATE THREE, عا TEN>
14	لوعا	<لوع ALTERNATE FOUR, عا TEN>
15	حعا	<ح ALTERNATE FIVE, عا TEN>
16	رععا	<رع ALTERNATE SIX, عا TEN>
17	موعا	<موع ALTERNATE SEVEN, عا TEN>
18	رععا	<رع ALTERNATE EIGHT, عا TEN>
19	نوعا	<نوع ALTERNATE NINE, عا TEN>

Hundred thousands The hundred thousands are represented using the appropriate number for the hundreds followed by **الى** ONE THOUSAND. This method is attested in Abbasid and Ilkhanate sources.

100,000	مالى	<ما ONE HUNDRED, الى ONE THOUSAND>
200,000	مال الى	<مال TWO HUNDRED, الى ONE THOUSAND>
300,000	ثلما الى	<ثلما THREE HUNDRED, الى ONE THOUSAND>
400,000	لبعالى	<لبع FOUR HUNDRED, الى ONE THOUSAND>
500,000	حمالى	<حم FIVE HUNDRED, الى ONE THOUSAND>
600,000	سعالى	<سع SIX HUNDRED, الى ONE THOUSAND>
700,000	مبعالى	<مبع SEVEN HUNDRED, الى ONE THOUSAND>
800,000	رعالى	<رع EIGHT HUNDRED, الى ONE THOUSAND>
900,000	نوعالى	<نوع NINE HUNDRED, الى ONE THOUSAND>

Another method shown by Pihan (1860: 211) is to use the primary unit followed by the compound **ما الف** ONE HUNDRED, **الف** ONE THOUSAND> (see figure 12). According to Pihan the alternate forms of the primary units are used for THREE .. NINE when writing the order.

100,000	ما الف	< ما ONE HUNDRED, الف ONE THOUSAND>
200,000	لا ما الف	< لا TWO, ما ONE HUNDRED, الف ONE THOUSAND>
300,000	لا ما الف	< لا ALTERNATE THREE, ما ONE HUNDRED, الف ONE THOUSAND>
400,000	لوا ما الف	< لوا ALTERNATE FOUR, ما ONE HUNDRED, الف ONE THOUSAND>
500,000	حوا ما الف	< حوا ALTERNATE FIVE, ما ONE HUNDRED, الف ONE THOUSAND>
600,000	ر ما الف	< ر ALTERNATE SIX, ما ONE HUNDRED, الف ONE THOUSAND>
700,000	موا ما الف	< موا ALTERNATE SEVEN, ما ONE HUNDRED, الف ONE THOUSAND>
800,000	هوا ما الف	< هوا ALTERNATE EIGHT, ما ONE HUNDRED, الف ONE THOUSAND>
900,000	عوا ما الف	< عوا ALTERNATE NINE, ما ONE HUNDRED, الف ONE THOUSAND>

This method is curious. It is not attested in the available sources and the provenance of the information given by Pihan is unknown.

Millions The millions are expressed in Arabic using repetition of ‘one thousand’: **الف الف** *alf alf* “thousand (and) thousand” means ‘one million’. The Diwani representation follows this pattern:

1,000,000	الف الف	< الف ONE THOUSAND, الف ONE THOUSAND>
2,000,000	الف الف	< الف TWO THOUSAND, الف ONE THOUSAND>
3,000,000	سالف الف	< سالف THREE THOUSAND, الف ONE THOUSAND>
4,000,000	لعالف الف	< لعالف FOUR THOUSAND, الف ONE THOUSAND>
5,000,000	حالف الف	< حالف FIVE THOUSAND, الف ONE THOUSAND>
6,000,000	سالف الف	< سالف SIX THOUSAND, الف ONE THOUSAND>
7,000,000	بعالف الف	< بعالف SEVEN THOUSAND, الف ONE THOUSAND>
8,000,000	هالف الف	< هالف EIGHT THOUSAND, الف ONE THOUSAND>
9,000,000	عالف الف	< عالف NINE THOUSAND, الف ONE THOUSAND>

Larger orders The available sources for Diwani numbers do not contain values that exceed the millions.

3.11 Character Properties

In the format of UnicodeData.txt:

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1ECC1;DIWANI SIYAQ NUMBER ONE;No;0;AL;;;1;N;;;;;
1ECC2;DIWANI SIYAQ NUMBER TWO;No;0;AL;;;2;N;;;;;
1ECC3;DIWANI SIYAQ NUMBER THREE;No;0;AL;;;3;N;;;;;
1ECC4;DIWANI SIYAQ NUMBER FOUR;No;0;AL;;;4;N;;;;;
1ECC5;DIWANI SIYAQ NUMBER FIVE;No;0;AL;;;5;N;;;;;
1ECC6;DIWANI SIYAQ NUMBER SIX;No;0;AL;;;6;N;;;;;
1ECC7;DIWANI SIYAQ NUMBER SEVEN;No;0;AL;;;7;N;;;;;
1ECC8;DIWANI SIYAQ NUMBER EIGHT;No;0;AL;;;8;N;;;;;
1ECC9;DIWANI SIYAQ NUMBER NINE;No;0;AL;;;9;N;;;;;
1ECCA;DIWANI SIYAQ NUMBER TEN;No;0;AL;;;10;N;;;;;
1ECCB;DIWANI SIYAQ NUMBER TWENTY;No;0;AL;;;20;N;;;;;
1ECCC;DIWANI SIYAQ NUMBER THIRTY;No;0;AL;;;30;N;;;;;
1ECCD;DIWANI SIYAQ NUMBER FORTY;No;0;AL;;;40;N;;;;;
1ECE;DIWANI SIYAQ NUMBER FIFTY;No;0;AL;;;50;N;;;;;
1ECCF;DIWANI SIYAQ NUMBER SIXTY;No;0;AL;;;60;N;;;;;
1ECD0;DIWANI SIYAQ NUMBER SEVENTY;No;0;AL;;;70;N;;;;;
1ECD1;DIWANI SIYAQ NUMBER EIGHTY;No;0;AL;;;80;N;;;;;
1ECD2;DIWANI SIYAQ NUMBER NINETY;No;0;AL;;;90;N;;;;;
1ECD3;DIWANI SIYAQ NUMBER ONE HUNDRED;No;0;AL;;;100;N;;;;;
1ECD4;DIWANI SIYAQ NUMBER TWO HUNDRED;No;0;AL;;;200;N;;;;;
1ECD5;DIWANI SIYAQ NUMBER THREE HUNDRED;No;0;AL;;;300;N;;;;;
1ECD6;DIWANI SIYAQ NUMBER FOUR HUNDRED;No;0;AL;;;400;N;;;;;
1ECD7;DIWANI SIYAQ NUMBER FIVE HUNDRED;No;0;AL;;;500;N;;;;;
1ECD8;DIWANI SIYAQ NUMBER SIX HUNDRED;No;0;AL;;;600;N;;;;;
1ECD9;DIWANI SIYAQ NUMBER SEVEN HUNDRED;No;0;AL;;;700;N;;;;;
1ECDA;DIWANI SIYAQ NUMBER EIGHT HUNDRED;No;0;AL;;;800;N;;;;;
1ECDB;DIWANI SIYAQ NUMBER NINE HUNDRED;No;0;AL;;;900;N;;;;;
1ECDC;DIWANI SIYAQ NUMBER ONE THOUSAND;No;0;AL;;;1000;N;;;;;
1ECDD;DIWANI SIYAQ NUMBER TWO THOUSAND;No;0;AL;;;2000;N;;;;;
1ECDE;DIWANI SIYAQ NUMBER THREE THOUSAND;No;0;AL;;;3000;N;;;;;
1ECDF;DIWANI SIYAQ NUMBER FOUR THOUSAND;No;0;AL;;;4000;N;;;;;
1ECE0;DIWANI SIYAQ NUMBER FIVE THOUSAND;No;0;AL;;;5000;N;;;;;
1ECE1;DIWANI SIYAQ NUMBER SIX THOUSAND;No;0;AL;;;6000;N;;;;;
1ECE2;DIWANI SIYAQ NUMBER SEVEN THOUSAND;No;0;AL;;;7000;N;;;;;
1ECE3;DIWANI SIYAQ NUMBER EIGHT THOUSAND;No;0;AL;;;8000;N;;;;;
1ECE4;DIWANI SIYAQ NUMBER NINE THOUSAND;No;0;AL;;;9000;N;;;;;
1ECE5;DIWANI SIYAQ NUMBER TEN THOUSAND;No;0;AL;;;10000;N;;;;;
1ECE6;DIWANI SIYAQ NUMBER TWENTY THOUSAND;No;0;AL;;;20000;N;;;;;
1ECE7;DIWANI SIYAQ NUMBER THIRTY THOUSAND;No;0;AL;;;30000;N;;;;;
1ECE8;DIWANI SIYAQ NUMBER FORTY THOUSAND;No;0;AL;;;40000;N;;;;;
1ECE9;DIWANI SIYAQ NUMBER FIFTY THOUSAND;No;0;AL;;;50000;N;;;;;
1ECEA;DIWANI SIYAQ NUMBER SIXTY THOUSAND;No;0;AL;;;60000;N;;;;;
1ECEB;DIWANI SIYAQ NUMBER SEVENTY THOUSAND;No;0;AL;;;70000;N;;;;;
1ECEC;DIWANI SIYAQ NUMBER EIGHTY THOUSAND;No;0;AL;;;80000;N;;;;;
1ECED;DIWANI SIYAQ NUMBER NINETY THOUSAND;No;0;AL;;;90000;N;;;;;
1EDEE;DIWANI SIYAQ NUMBER ALTERNATE THREE;No;0;AL;;;3;N;;;;;
1ECEf;DIWANI SIYAQ NUMBER ALTERNATE FOUR;No;0;AL;;;4;N;;;;;
1ECF0;DIWANI SIYAQ NUMBER ALTERNATE FIVE;No;0;AL;;;5;N;;;;;
1ECF1;DIWANI SIYAQ NUMBER ALTERNATE SIX;No;0;AL;;;6;N;;;;;
1ECF2;DIWANI SIYAQ NUMBER ALTERNATE SEVEN;No;0;AL;;;7;N;;;;;
1ECF3;DIWANI SIYAQ NUMBER ALTERNATE EIGHT;No;0;AL;;;8;N;;;;;
1ECF4;DIWANI SIYAQ NUMBER ALTERNATE NINE;No;0;AL;;;9;N;;;;;
1ECF5;DIWANI SIYAQ NUMBER ALTERNATE TEN;No;0;AL;;;10;N;;;;;
1ECF6;DIWANI SIYAQ NUMBER ALTERNATE THREE HUNDRED;No;0;AL;;;300;N;;;;;

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1ECF7;DIWANI SIYAQ NUMBER ALTERNATE FOUR HUNDRED;No;0;AL;;;400;N;;;;;
1ECF8;DIWANI SIYAQ NUMBER ALTERNATE SEVEN HUNDRED;No;0;AL;;;700;N;;;;;
1ECF9;DIWANI SIYAQ NUMBER ALTERNATE TWENTY THOUSAND;No;0;AL;;;20000;N;;;;;
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Linebreaking In the format of LineBreak.txt:

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1ECC1..1ECF9;AL # No [57] DIWANI SIYAQ NUMBER ONE ..
                        DIWANI SIYAQ NUMBER ALTERNATE TWENTY THOUSAND
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3.12 Confusion Data

Given below are Arabic sequences that may mimic the forms of Diwani Siyaq Numbers:

Diwani Siyaq Numbers	Arabic

ONE	; ALEF
TWO	; LAM, ALEF
THREE	; SEEN, YEH BARREE
FOUR	; LAM, DOTLESS BEH, AIN, ALEF
FIVE	; HAH, ALEF
SIX	; SEEN, ALEF
SEVEN	; HEH GOAL, AIN, ALEF
EIGHT	; HEH GOAL, ALEF
NINE	; DOTLESS BEH, AIN, ALEF
TEN	; AIN, ALEF
TWENTY	; HAMZA, DOTLESS BEH
THIRTY	; DOTLESS BEH, LAM, MEEM, ALEF
FORTY	; LAM, DOTLESS BEH, AIN, ALEF
FIFTY	; HAH, ALEF
SIXTY	; TATWEEL, ALEF
SEVENTY	; HEH GOAL, AIN, ALEF
EIGHTY	; DOTLESS BEH, ALEF
NINETY	; DOTLESS BEH, AIN, ALEF
ONE HUNDRED	; MEEM, ALEF
TWO HUNDRED	; MEEM, ALEF, LAM, HEH GOAL
THREE HUNDRED	; SEEN, MEEM, ALEF
FOUR HUNDRED	; ALEF, AIN, MEEM, ALEF
FIVE HUNDRED	; HAH, MEEM, ALEF
SIX HUNDRED	; SEEN, TATWEEL, MEEM, ALEF
SEVEN HUNDRED	; LAM, MEEM, ALEF
EIGHT HUNDRED	; LAM, MEEM, ALEF
NINE HUNDRED	; LAAM, AIN, MEEM, ALEF
ONE THOUSAND	; ALEF, LAM, FEH
TWO THOUSAND	; ALEF, AIN, FEH, YEH
THREE THOUSAND	; SEEN, ALEF, LAM, FEH
FOUR THOUSAND	; LAM, DOTLESS BEH, AIN, ALEF, LAM, FEH
FIVE THOUSAND	; HAH, ALEF, LAM, FEH
SIX THOUSAND	; SEEN, ALEF, LAM, FEH
SEVEN THOUSAND	; DOTLESS BEH, AIN, ALEF, LAM, FEH
EIGHT THOUSAND	; HEH GOAL, ALEF, LAM, FEH
NINE THOUSAND	; LAM, AIN, ALEF, LAH, FEH
TEN THOUSAND	; AIN, ALEF, LAM, FEH
TWENTY THOUSAND	; AIN, DOTLESS BEH, LAM, ALEF
THIRTY THOUSAND	; DOTLESS BEH, DOTLESS BEH, LAM, ALEF
FORTY THOUSAND	; LAM, LAM, AIN, LAM, ALEF
FIFTY THOUSAND	; HAH, LAM, ALEF
SIXTY THOUSAND	; SEEN, LAM, ALEF
SEVENTY THOUSAND	; HEH GOAL, AIN, LAM, ALEF
EIGHTY THOUSAND	; HEH GOAL, LAM, ALEF

NINETY THOUSAND	; LAM, AIN, LAM, ALEF
ALTERNATE THREE	; LAM, LAM, ALEF
ALTERNATE FOUR	; LAM, DOTLESS BEH, medial AIN
ALTERNATE FIVE	; initial HAH
ALTERNATE SIX	; initial SEEN
ALTERNATE SEVEN	; DOTLESS BEH, medial AIN
ALTERNATE EIGHT	; medial HEH GOAL
ALTERNATE NINE	; LAM, medial AIN
ALTERNATE TEN	; HAMZA
ALTERNATE THREE HUNDRED	; SEEN, HEH DOACHASHMEE, MEEM, ALEF
ALTERNATE FOUR HUNDRED	; ALIF, SEEN, MEEM, ALEF
ALTERNATE SEVEN HUNDRED	; SEEN, MEEM, ALEF
ALTERNATE TWENTY THOUSAND	; AIN, SEEN, ALEF, LAM, FEH








4 References

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	1ECC	1ECD	1ECE	1ECF
0		١٤٠ 1ECD0	١٤١ 1ECE0	١٤٢ 1ECF0
1	١٤٣ 1ECC1	١٤٤ 1ECD1	١٤٥ 1ECE1	١٤٦ 1ECF1
2	١٤٧ 1ECC2	١٤٨ 1ECD2	١٤٩ 1ECE2	١٥٠ 1ECF2
3	١٥١ 1ECC3	١٥٢ 1ECD3	١٥٣ 1ECE3	١٥٤ 1ECF3
4	١٥٥ 1ECC4	١٥٦ 1ECD4	١٥٧ 1ECE4	١٥٨ 1ECF4
5	١٥٩ 1ECC5	١٦٠ 1ECD5	١٦١ 1ECE5	١٦٢ 1ECF5
6	١٦٣ 1ECC6	١٦٤ 1ECD6	١٦٥ 1ECE6	١٦٦ 1ECF6
7	١٦٧ 1ECC7	١٦٨ 1ECD7	١٦٩ 1ECE7	١٧٠ 1ECF7
8	١٧١ 1ECC8	١٧٢ 1ECD8	١٧٣ 1ECE8	١٧٤ 1ECF8
9	١٧٥ 1ECC9	١٧٦ 1ECD9	١٧٧ 1ECE9	١٧٨ 1ECF9
A	١٧٩ 1ECCA	١٨٠ 1ECDA	١٨١ 1ECEA	
B	١٨٢ 1ECCB	١٨٣ 1ECDB	١٨٤ 1ECEB	
C	١٨٥ 1ECCC	١٨٦ 1ECDC	١٨٧ 1ECEC	
D	١٨٨ 1ECDD	١٨٩ 1ECDD	١٩٠ 1ECED	
E	١٩١ 1ECCE	١٩٢ 1ECDE	١٩٣ 1ECDE	
F	١٩٤ 1ECCF	١٩٥ 1ECDF	١٩٦ 1ECDF	

	x1	x10	x100	x1,000	x10,000	x100,000
1	ا	عا	ما	الف	عالف	مالف
2	لا	عە	مال	الفى	عەرلا	مال الف
3	ى	مە	يلما	سالى	ملا	يلما الف
4	لعا	لعا	لعا	لعا	لعا	لعا الف
5	حا	حا	حما	حالى	حلا	حما الف
6	سا	سا	سعا	سالى	سلا	سعا الف
7	معا	معا	معا	معالى	معا	معا الف
8	رها	رها	رها	رها	رها	رها الف
9	نعا	نعا	نعا	نعالى	نعا	نعا الف

Table 1: Diwani forms of the Siyaq numbers for six decimal orders.

عن السوار وكهال الممنون والبلد المملوكون					
الاسماء	بازور	احوال	198,313	166,283	1,547,734
مادون المارعة	مارع المارعة	الاسماء			
الاسماء	الاسماء	الاسماء	9526	25,000	75,576
الاسماء	الاسماء	الاسماء	140,259	13,585	16,736
الاسماء	الاسماء	الاسماء	110,154	46,336	38,350
الاسماء	الاسماء	الاسماء	24,300	20,590	50,219
الاسماء	الاسماء	الاسماء	46,480	13,666	30,035

Figure 1: Folio of an Abbasid financial document from 918–919 CE (from Kremer 1887: fig. 1).

النار الاوسطه	روان	النار الاوسطه	النار الاوسطه
لوتو دما موعه	لوتو دما موعه	لوتو دما موعه	لوتو دما موعه
159,089	60,532	40,327	
بارك	بارك	بارك	بارك
لوتو دما موعه	لوتو دما موعه	لوتو دما موعه	لوتو دما موعه
121,095	310,720	42,499	
المراكب بالبحر	المراكب بالبحر	المراكب بالبحر	المراكب بالبحر
لوتو دما موعه	لوتو دما موعه	لوتو دما موعه	لوتو دما موعه
80,250	42,750	22,575	
الغنم والبقر والحمير والاشجار والثمار والحدائق والحدائق	الغنم والبقر والحمير والاشجار والثمار والحدائق والحدائق	الغنم والبقر والحمير والاشجار والثمار والحدائق والحدائق	الغنم والبقر والحمير والاشجار والثمار والحدائق والحدائق
16,000	60,370	16,975	
لوتو دما موعه	لوتو دما موعه	لوتو دما موعه	لوتو دما موعه
1,634,520	1,260,922	13,874	
لوتو دما موعه	لوتو دما موعه	لوتو دما موعه	لوتو دما موعه
80,000	364,380	258,040	

Figure 2: Folio of an Abbasid financial document from 918–919 CE (from Kremer 1887: fig. 2a).

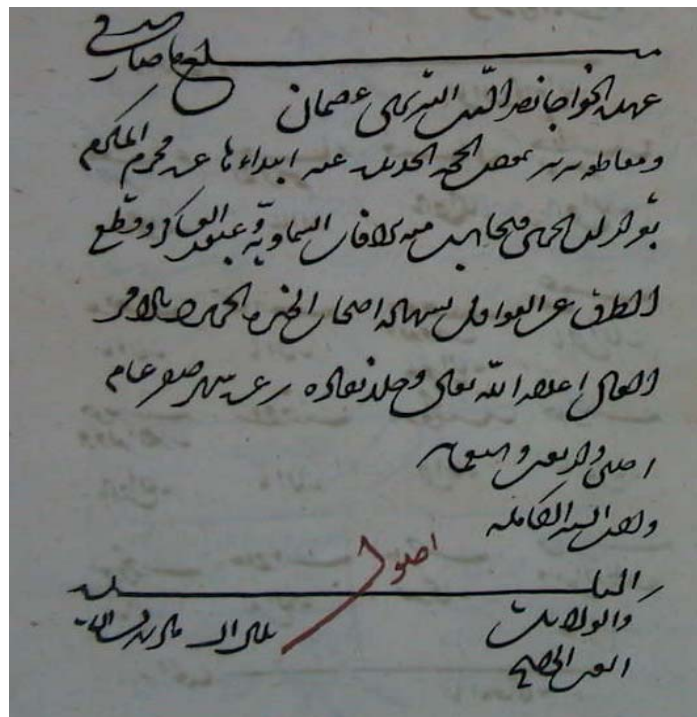
٢٦٦	٢٦٧	٢٦٨	٢٦٩	٢٧٠	٢٧١	٢٧٢	٢٧٣	٢٧٤	٢٧٥	٢٧٦	٢٧٧	٢٧٨	٢٧٩	٢٨٠	٢٨١	٢٨٢	٢٨٣	٢٨٤	٢٨٥	٢٨٦	٢٨٧	٢٨٨	٢٨٩	٢٩٠	٢٩١	٢٩٢	٢٩٣	٢٩٤	٢٩٥	٢٩٦	٢٩٧	٢٩٨	٢٩٩	٣٠٠	٣٠١	٣٠٢	٣٠٣	٣٠٤	٣٠٥	٣٠٦	٣٠٧	٣٠٨	٣٠٩	٣١٠	٣١١	٣١٢	٣١٣	٣١٤	٣١٥	٣١٦	٣١٧	٣١٨	٣١٩	٣٢٠	٣٢١	٣٢٢	٣٢٣	٣٢٤	٣٢٥	٣٢٦	٣٢٧	٣٢٨	٣٢٩	٣٣٠	٣٣١	٣٣٢	٣٣٣	٣٣٤	٣٣٥	٣٣٦	٣٣٧	٣٣٨	٣٣٩	٣٤٠	٣٤١	٣٤٢	٣٤٣	٣٤٤	٣٤٥	٣٤٦	٣٤٧	٣٤٨	٣٤٩	٣٥٠	٣٥١	٣٥٢	٣٥٣	٣٥٤	٣٥٥	٣٥٦	٣٥٧	٣٥٨	٣٥٩	٣٦٠	٣٦١	٣٦٢	٣٦٣	٣٦٤	٣٦٥	٣٦٦	٣٦٧	٣٦٨	٣٦٩	٣٧٠	٣٧١	٣٧٢	٣٧٣	٣٧٤	٣٧٥	٣٧٦	٣٧٧	٣٧٨	٣٧٩	٣٨٠	٣٨١	٣٨٢	٣٨٣	٣٨٤	٣٨٥	٣٨٦	٣٨٧	٣٨٨	٣٨٩	٣٩٠	٣٩١	٣٩٢	٣٩٣	٣٩٤	٣٩٥	٣٩٦	٣٩٧	٣٩٨	٣٩٩	٤٠٠	٤٠١	٤٠٢	٤٠٣	٤٠٤	٤٠٥	٤٠٦	٤٠٧	٤٠٨	٤٠٩	٤١٠	٤١١	٤١٢	٤١٣	٤١٤	٤١٥	٤١٦	٤١٧	٤١٨	٤١٩	٤٢٠	٤٢١	٤٢٢	٤٢٣	٤٢٤	٤٢٥	٤٢٦	٤٢٧	٤٢٨	٤٢٩	٤٣٠	٤٣١	٤٣٢	٤٣٣	٤٣٤	٤٣٥	٤٣٦	٤٣٧	٤٣٨	٤٣٩	٤٤٠	٤٤١	٤٤٢	٤٤٣	٤٤٤	٤٤٥	٤٤٦	٤٤٧	٤٤٨	٤٤٩	٤٥٠	٤٥١	٤٥٢	٤٥٣	٤٥٤	٤٥٥	٤٥٦	٤٥٧	٤٥٨	٤٥٩	٤٦٠	٤٦١	٤٦٢	٤٦٣	٤٦٤	٤٦٥	٤٦٦	٤٦٧	٤٦٨	٤٦٩	٤٧٠	٤٧١	٤٧٢	٤٧٣	٤٧٤	٤٧٥	٤٧٦	٤٧٧	٤٧٨	٤٧٩	٤٨٠	٤٨١	٤٨٢	٤٨٣	٤٨٤	٤٨٥	٤٨٦	٤٨٧	٤٨٨	٤٨٩	٤٩٠	٤٩١	٤٩٢	٤٩٣	٤٩٤	٤٩٥	٤٩٦	٤٩٧	٤٩٨	٤٩٩	٥٠٠	٥٠١	٥٠٢	٥٠٣	٥٠٤	٥٠٥	٥٠٦	٥٠٧	٥٠٨	٥٠٩	٥١٠	٥١١	٥١٢	٥١٣	٥١٤	٥١٥	٥١٦	٥١٧	٥١٨	٥١٩	٥٢٠	٥٢١	٥٢٢	٥٢٣	٥٢٤	٥٢٥	٥٢٦	٥٢٧	٥٢٨	٥٢٩	٥٣٠	٥٣١	٥٣٢	٥٣٣	٥٣٤	٥٣٥	٥٣٦	٥٣٧	٥٣٨	٥٣٩	٥٤٠	٥٤١	٥٤٢	٥٤٣	٥٤٤	٥٤٥	٥٤٦	٥٤٧	٥٤٨	٥٤٩	٥٥٠	٥٥١	٥٥٢	٥٥٣	٥٥٤	٥٥٥	٥٥٦	٥٥٧	٥٥٨	٥٥٩	٥٦٠	٥٦١	٥٦٢	٥٦٣	٥٦٤	٥٦٥	٥٦٦	٥٦٧	٥٦٨	٥٦٩	٥٧٠	٥٧١	٥٧٢	٥٧٣	٥٧٤	٥٧٥	٥٧٦	٥٧٧	٥٧٨	٥٧٩	٥٨٠	٥٨١	٥٨٢	٥٨٣	٥٨٤	٥٨٥	٥٨٦	٥٨٧	٥٨٨	٥٨٩	٥٩٠	٥٩١	٥٩٢	٥٩٣	٥٩٤	٥٩٥	٥٩٦	٥٩٧	٥٩٨	٥٩٩	٦٠٠	٦٠١	٦٠٢	٦٠٣	٦٠٤	٦٠٥	٦٠٦	٦٠٧	٦٠٨	٦٠٩	٦١٠	٦١١	٦١٢	٦١٣	٦١٤	٦١٥	٦١٦	٦١٧	٦١٨	٦١٩	٦٢٠	٦٢١	٦٢٢	٦٢٣	٦٢٤	٦٢٥	٦٢٦	٦٢٧	٦٢٨	٦٢٩	٦٣٠	٦٣١	٦٣٢	٦٣٣	٦٣٤	٦٣٥	٦٣٦	٦٣٧	٦٣٨	٦٣٩	٦٤٠	٦٤١	٦٤٢	٦٤٣	٦٤٤	٦٤٥	٦٤٦	٦٤٧	٦٤٨	٦٤٩	٦٥٠	٦٥١	٦٥٢	٦٥٣	٦٥٤	٦٥٥	٦٥٦	٦٥٧	٦٥٨	٦٥٩	٦٦٠	٦٦١	٦٦٢	٦٦٣	٦٦٤	٦٦٥	٦٦٦	٦٦٧	٦٦٨	٦٦٩	٦٧٠	٦٧١	٦٧٢	٦٧٣	٦٧٤	٦٧٥	٦٧٦	٦٧٧	٦٧٨	٦٧٩	٦٨٠	٦٨١	٦٨٢	٦٨٣	٦٨٤	٦٨٥	٦٨٦	٦٨٧	٦٨٨	٦٨٩	٦٩٠	٦٩١	٦٩٢	٦٩٣	٦٩٤	٦٩٥	٦٩٦	٦٩٧	٦٩٨	٦٩٩	٧٠٠	٧٠١	٧٠٢	٧٠٣	٧٠٤	٧٠٥	٧٠٦	٧٠٧	٧٠٨	٧٠٩	٧١٠	٧١١	٧١٢	٧١٣	٧١٤	٧١٥	٧١٦	٧١٧	٧١٨	٧١٩	٧٢٠	٧٢١	٧٢٢	٧٢٣	٧٢٤	٧٢٥	٧٢٦	٧٢٧	٧٢٨	٧٢٩	٧٣٠	٧٣١	٧٣٢	٧٣٣	٧٣٤	٧٣٥	٧٣٦	٧٣٧	٧٣٨	٧٣٩	٧٤٠	٧٤١	٧٤٢	٧٤٣	٧٤٤	٧٤٥	٧٤٦	٧٤٧	٧٤٨	٧٤٩	٧٥٠	٧٥١	٧٥٢	٧٥٣	٧٥٤	٧٥٥	٧٥٦	٧٥٧	٧٥٨	٧٥٩	٧٦٠	٧٦١	٧٦٢	٧٦٣	٧٦٤	٧٦٥	٧٦٦	٧٦٧	٧٦٨	٧٦٩	٧٧٠	٧٧١	٧٧٢	٧٧٣	٧٧٤	٧٧٥	٧٧٦	٧٧٧	٧٧٨	٧٧٩	٧٨٠	٧٨١	٧٨٢	٧٨٣	٧٨٤	٧٨٥	٧٨٦	٧٨٧	٧٨٨	٧٨٩	٧٩٠	٧٩١	٧٩٢	٧٩٣	٧٩٤	٧٩٥	٧٩٦	٧٩٧	٧٩٨	٧٩٩	٨٠٠	٨٠١	٨٠٢	٨٠٣	٨٠٤	٨٠٥	٨٠٦	٨٠٧	٨٠٨	٨٠٩	٨١٠	٨١١	٨١٢	٨١٣	٨١٤	٨١٥	٨١٦	٨١٧	٨١٨	٨١٩	٨٢٠	٨٢١	٨٢٢	٨٢٣	٨٢٤	٨٢٥	٨٢٦	٨٢٧	٨٢٨	٨٢٩	٨٣٠	٨٣١	٨٣٢	٨٣٣	٨٣٤	٨٣٥	٨٣٦	٨٣٧	٨٣٨	٨٣٩	٨٤٠	٨٤١	٨٤٢	٨٤٣	٨٤٤	٨٤٥	٨٤٦	٨٤٧	٨٤٨	٨٤٩	٨٥٠	٨٥١	٨٥٢	٨٥٣	٨٥٤	٨٥٥	٨٥٦	٨٥٧	٨٥٨	٨٥٩	٨٦٠	٨٦١	٨٦٢	٨٦٣	٨٦٤	٨٦٥	٨٦٦	٨٦٧	٨٦٨	٨٦٩	٨٧٠	٨٧١	٨٧٢	٨٧٣	٨٧٤	٨٧٥	٨٧٦	٨٧٧	٨٧٨	٨٧٩	٨٨٠	٨٨١	٨٨٢	٨٨٣	٨٨٤	٨٨٥	٨٨٦	٨٨٧	٨٨٨	٨٨٩	٨٩٠	٨٩١	٨٩٢	٨٩٣	٨٩٤	٨٩٥	٨٩٦	٨٩٧	٨٩٨	٨٩٩	٩٠٠	٩٠١	٩٠٢	٩٠٣	٩٠٤	٩٠٥	٩٠٦	٩٠٧	٩٠٨	٩٠٩	٩١٠	٩١١	٩١٢	٩١٣	٩١٤	٩١٥	٩١٦	٩١٧	٩١٨	٩١٩	٩٢٠	٩٢١	٩٢٢	٩٢٣	٩٢٤	٩٢٥	٩٢٦	٩٢٧	٩٢٨	٩٢٩	٩٣٠	٩٣١	٩٣٢	٩٣٣	٩٣٤	٩٣٥	٩٣٦	٩٣٧	٩٣٨	٩٣٩	٩٤٠	٩٤١	٩٤٢	٩٤٣	٩٤٤	٩٤٥	٩٤٦	٩٤٧	٩٤٨	٩٤٩	٩٥٠	٩٥١	٩٥٢	٩٥٣	٩٥٤	٩٥٥	٩٥٦	٩٥٧	٩٥٨	٩٥٩	٩٦٠	٩٦١	٩٦٢	٩٦٣	٩٦٤	٩٦٥	٩٦٦	٩٦٧	٩٦٨	٩٦٩	٩٧٠	٩٧١	٩٧٢	٩٧٣	٩٧٤	٩٧٥	٩٧٦	٩٧٧	٩٧٨	٩٧٩	٩٨٠	٩٨١	٩٨٢	٩٨٣	٩٨٤	٩٨٥	٩٨٦	٩٨٧	٩٨٨	٩٨٩	٩٩٠	٩٩١	٩٩٢	٩٩٣	٩٩٤	٩٩٥	٩٩٦	٩٩٧	٩٩٨	٩٩٩	١٠٠٠
١٢٢,٦٤٤	٤٦٥,٠٧٨	١,٥٧٠,٥٢٥																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

Figure 3: Folio of an Abbasid financial document from 918–919 CE (from Kremer 1887: fig. 2b).

<p>الحمد لله الذي جعل الحساب من أجل العباد والاضحاح للعامة بالمعرب ولتفادله هذا الحساب الذي لا ينفك عن كاهن جاد في العالين وسعي غياطة وتزلف من العام على لونه في كل سنة والاحمال المبركة والاموال المسماة</p> <p>باسم المولى في الحساب</p> <p>بسم الله الرحمن الرحيم</p> <p>الحمد لله الذي جعل الحساب من أجل العباد</p>			4,746,492		
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	40,460	80,750	290,773
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	102,062	230,647	1,080,000
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	133,097	1,460,000	113,057
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	352,570	115,114	315,300
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	5,397	52,985	15,765
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	65,332		
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	56,750		14,501
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>		5,478	
<p>الاردن من الحساب</p> <p>ما</p> <p>لبن الحساب</p> <p>مال الحساب</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	<p>ما</p> <p>ما</p> <p>ما</p> <p>ما</p>	82,422	82,422	34,120

Figure 4: Folio of an Abbasid financial document from 918–919 CE (from Kremer 1887: fig. 3a).

Figure 5: Folio of an Abbasid financial document from 918–919 CE (from Kremer 1887: fig. 3b).



3,288,000

Figure 6: Part of a financial document from the Ilkhanate period dated to 1340 CE (from Elitaş et al 2008: 125).

Figure 7: Part of a financial document from the Ilkhanate period dated to 1340 CE (from Elitaş et al 2008: 126).

الحسن بن الحسن	الحسن بن الحسن			
57,000				78,000
عبد الله بن عبد الله	عبد الله بن عبد الله	عبد الله بن عبد الله	عبد الله بن عبد الله	عبد الله بن عبد الله
20,000	37,000	25,000		48,000
وصف				
875,000				
وصف				
338,700				
وصف				
10,000	10,000	24,000		30,000
وصف				
15,000		40,000		30,000
وصف				
28,700		25,000		26,000

Figure 8: Part of a financial document from the Ilkhanate period dated to 1340 CE (from Elitaş et al 2008: 127).

Figure 9: Part of a financial document from the Ilkhanate period dated to 1340 CE (from Elitaş et al 2008: 128).

ملاحظات	مبلغ	مبلغ	مبلغ
مبلغ اليوم	100	120	90
مبلغ اليوم	3,000	3,600	2,700
مبلغ اليوم	32,700	43,200	36,000
مبلغ اليوم	60	70	50
مبلغ اليوم	1,700	2,100	1,500
مبلغ اليوم	22,600	25,200	18,000
مبلغ اليوم	120,000		
مبلغ اليوم	90,000		
مبلغ اليوم	50,000		
مبلغ اليوم	2,412,900		

Figure 10: Part of a financial document from the Ilkhanate period dated to 1340 CE (from Elitaş et al 2008: 129, 130).

LES CHIFFRES « DÏVÂNÎ » CHEZ LES ARABES (1)

CHIFFRES	VALEUR	CHIFFRES	VALEUR	CHIFFRES	VALEUR
ا	1	لعمرو	19	الف ou الف	1,000
لا	2	لعمرو	20	الف	2,000
لا ou ع	3	لعمرو	30	الف	3,000
لعمرو	4	لعمرو	40	الف	4,000
حا	5	حا	50	الف	5,000
لا	6	لا	60	الف	6,000
لعمرو	7	لعمرو	70	الف	7,000
ها	8	ها	80	الف	8,000
لعمرو	9	لعمرو	90	الف	9,000
عا	10	عا	100	الف	10,000
عا	11	عا	200	عها	20,000
لا	12	لعمرو ou لعمرو	300	لعمرو	30,000
لعمرو	13	لعمرو	400	لعمرو	40,000
لعمرو	14	لعمرو	500	لعمرو	50,000
لعمرو	15	لعمرو	600	لعمرو	60,000
لعمرو	16	لعمرو	700	لعمرو	70,000
لعمرو	17	لعمرو	800	لعمرو	80,000
لعمرو	18	لعمرو	900	لعمرو	90,000

(1) D'après un manuscrit du *Vocabulaire arabe-persan* de ZAMAKHCHARI (Bibliothèque Nationale, ancien fonds arabe n° 1256), reproduits dans la *Grammaire arabe* de SILVESTRE DE SACY et dans l'ouvrage de A.-P. Pihan.

Figure 11: Hand-written chart of “the *diwani* numbers of the Arabs” (from Kazem-Zadeh 1915: Plate VII). The variant form of 300 is missing in the original.

UNITÉS.		DIZAINES.		CENTAINES.	
ا	1	عا	10	ما	100
لا	2	٤٥	20	مار	200
لا ou لا	3	٤٥	30	لما ou لهما	300
لعا	4	لعا	40	لعا	400
حا	5	حا	50	حما	500
سا	6	سا	60	سما	600
بع	7	بع	70	بع	700
ها	8	ها	80	ها	800
ع	9	ع	90	ع	900
MILLE.		DIZAINES DE MILLE.		CENTAINES DE MILLE.	
الف ou الف	1,000	عالف	10,000	مالف	100,000
الف	2,000	٤٥٥	20,000	لامالف	200,000
سالف	3,000	سلا	30,000	٤٥٥الف	300,000
لعالف	4,000	لعالا	40,000	لوعالف	400,000
حالف	5,000	حلا	50,000		
سالف	6,000	سلا	60,000		
بعالف	7,000	بعلا	70,000		
هالف	8,000	هلا	80,000		
عالف	9,000	علا	90,000		

Figure 12: Printed forms of Diwani numbers (from Pihan 1860: 211).

EXEMPLES DE QUELQUES NOMBRES COMPOSÉS.

ا٤	11	بع٤	17	لالعا	42
لا٤	12	٤٥٤	18	هلع	48
٤٤	13	لوع	19	مالعا	141
لوع	14	ا٤٤	21	مالا حا	152
ح٤	15	لوع٤	24	مار	206
س٤	16	حبا	35	لما حو	315

Figure 13: Printed forms of Diwani compound numbers (from Pihan 1860: 212).

DE L'ÉCRITURE ARABE.

33

on figurait ces chiffres sur le sable ; l'autre est appelée *dyoudny*, et s'employait jadis dans les bureaux de l'administration supérieure.

CHIFFRES GHOBAR.

1	2	3	4	5	6	7	8	9
1	2	3	4	5	6	7	8	9

Comme il n'existe pas de *zéro* dans ce genre de numération, les dizaines s'indiquent par un point sur les unités, les centaines par deux points, et les mille par trois points; exemples : 𐤁𐤍 20, 𐤁𐤍𐤅 700, 𐤁𐤍𐤅𐤍 3000, etc.

Les chiffres *ghobār* sont usités dans certains ouvrages de mathématiques et de géographie.

CHIFFRES D'YOUNG.

1 2 3 4 5 6 7 8 9 10
 ا لا لا (ou) لعا ح ا با عا عا
 11 12 13 14 15 16 etc.
 اء لاء لاء لاء لاء لاء

Ces signes paraissent être plutôt des abréviations de mots arabes exprimant les quantités, que de véritables chiffres. Pour les nombres plus élevés, on peut voir le

Figure 14: Printed forms of the “chiffres *dyouâny*” or “*diwani* numbers” (from Pihan 1861: 33). The metal font differs from that used in the excerpts shown in figures 12 and 13.