

BYZANTINOGRAFOS Version 2.0

A COMPLETE SYSTEM FOR WRITING THE
BYZANTINE MUSICAL NOTATION



Includes:

- All Byzantine notation symbols,
- “Quality” symbols,
- Testimonies,
- symbols such as:
- (flats, diesis, “fthores”, “hroes”),
- “Isokratimata”, rhythm symbols,
- Symbols of *old Notation*

Requires:

- Personal computer with OS *Windows Xp, Vista, 7* and *Microsoft Word 2000, 2003, 2007, 2010*.

Gives:

- The ability of writing any kind of *Byzantine Musical text*, with easy qualitative way, as well a, *Traditional folk songs* in any form and size.

Is granted:

- With *CD installation program* in a complete package and friendly user manual.



Creator of the product

Gezerlis G. Velissarios
Dr. of Informatics - Msc

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Version 2.0

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Includes:

- All the Notation symbols (Parasimantiki),
- Symbols of “Quality”,
- Testimonies,
- Symbols such as: flats, diesis, “fthores”, “hroes”),
- “Isokratimata”, rhythm symbols.
- Symbols of **Old Notation** (parasimantiki).

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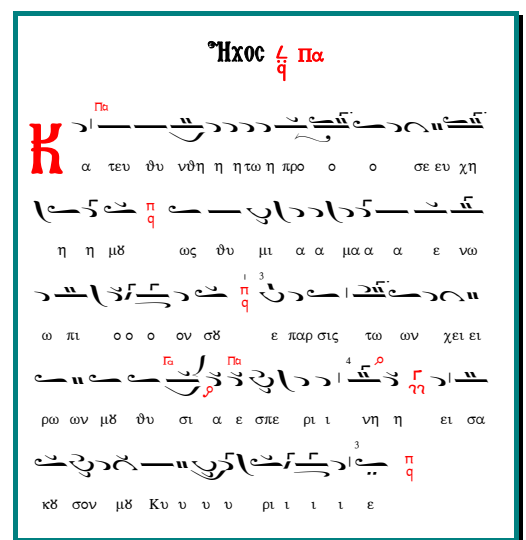
- Personal Computer with OS - **Windows 95/98/2000/NT/Xp** and the text editor **Microsoft Word 95/97/2000/Xp(En/Gr)**.

Is a special software for:

- Byzantine Music and Traditional folk music book Editors, Odeums, CD companies, Chanters, Choirs of B.M., Students, e.t.c.

Creator of the product, Information - orders:

- **Gezerlis G. Velissarios**, Dr. of Informatics - MSc,
e-mail: gbelis@di.uoa.gr,



User Manual for the program of writing the Byzantine Music Notation,
“Byzantinografos 2.0”, (Byzantingrafos 2.0).

June 2011.

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individual that loves the Byzantine Music, as a tool for a better diffusion of
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Creator of Product:

Gezerlis G. Velissarios

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INTRODUCTION

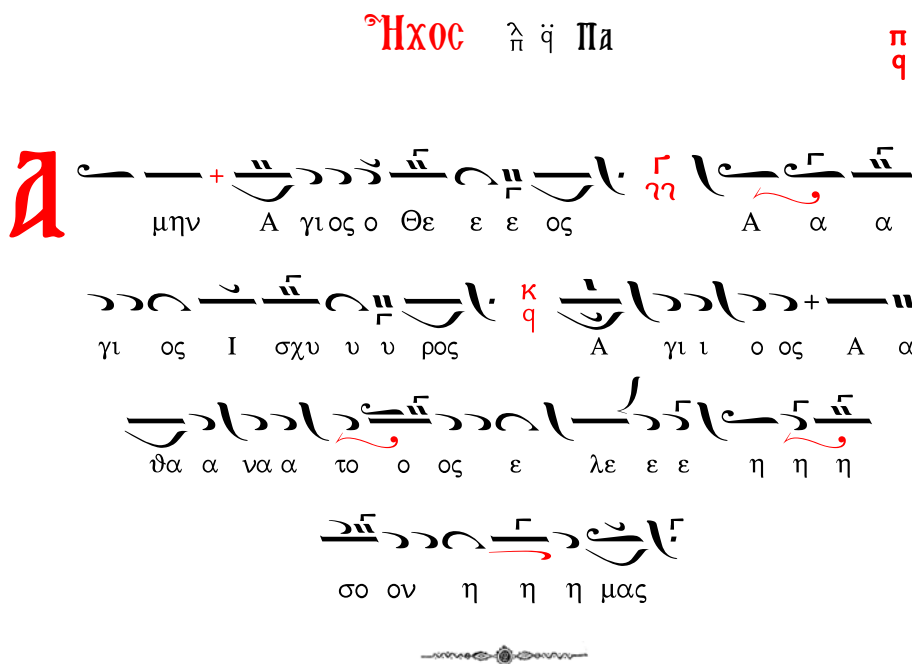
It presents particular of interest for someone, to observe, and learn the way of development and evolution of the writing style and publication of Byzantine Musical Notation texts, as well as, the way of writing of any ancient piece of text, in general, through the centuries. It is a course that begins in the ancient era with the use of primitive ways of writing, such as the clay and the marble, evolved through the centuries in the writing on papyrus. New materials appeared such as parchment, or other of similar type, to reach in the era of discovery of the paper and the first printing machine. Of course, up to then, the production of books became via the copy by hand. From then on, a continuous evolutionary course took place, with regard to the way of publication of various texts, as well as, those of Byzantine Music, which was based mainly in the well known method of typesetting. Characteristic is the difficulty that the Petros Manouel, from Efesos, met, trying to publish the first printed book of Byzantine Music, "**the Anastasimatario**", which was printed out with typesetting, in Bucharest, **in 1820**.

With the great technological development that was taken place the last years all these laborious, for the past, operations of writing and publication, have already been automated with the use of computers, printers, scanners of high resolution and all the others technological material that are used today in the "World of Publication".

On the other side, with regard to the area of *Hellenic Byzantine Music*, we could say that a very high development has also been taken place, specifically in our days where the common interest has by far focused on Byzantine Music. A lot of new books have been written and printed, new byzantine music composers publish their work, more choruses, associations, CD companies, odeums, as well as, academic research programs that deal systematically with the Byzantine music, appears more and more. And not only this, but at the same time with the Byzantine Music, the *traditional Hellenic folk music* is presented in the limelight.

With the new **System of Writing of Byzantine Music Notation "Byzantinografos 2.0"**, we believe that we have largely accomplished to combine the way of writing and publication of Byzantine and Traditional Folk Music with the current technology of Computers. Something that up to now, was completely absent from this area.

ΤΡΙΑΓΓΙΟC ΥΜΝΟC

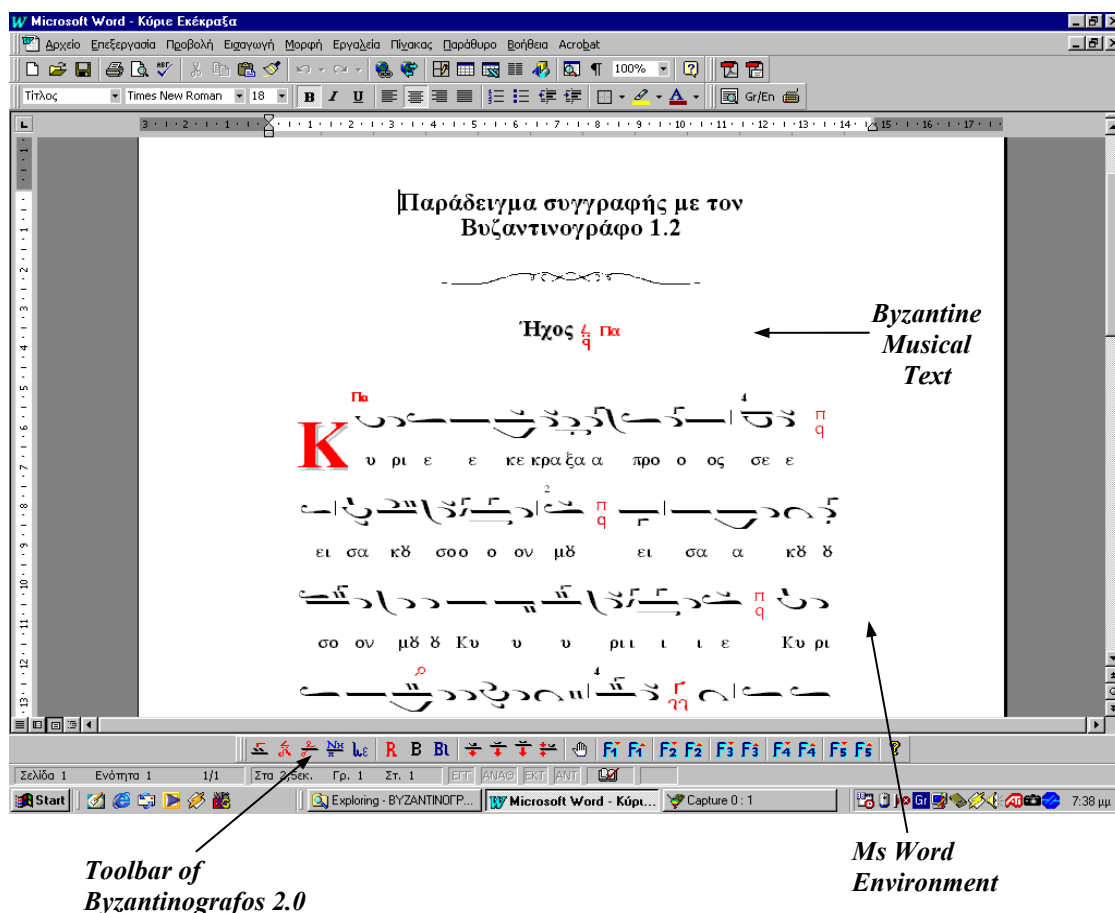


Byzantine musical text "Trisagios hymn – hymn to Godhead" in sound of plagios A'.

The **Byzantinografos 2.0** is a complete system, that provides the capability of writing in a personal computer the Byzantine Music Notation in any form and size. In this system all the symbols of Byzantine Music Notation have been drawn as Byzantine Music fonts. Each symbol of these fonts, can combine itself with all the other symbols, so that, the writing of all possible combinations that are met in the byzantine music books, to be feasible in writing. Thus, it's not essential for each different combination of symbols, to draw its corresponding representation in some font, something, that would lead to an awkward system. On the contrary, the way we developed the Byzantine music fonts leads to a simple and more optimal system. An example of writing with the "Byzantinografos 2.0" appears above.

Description of Byzantinografos 2.0

The software of Byzantinografos 2.0 is designed to be incorporated in the well known text editor Microsoft Word, that runs under the environment of Microsoft Windows. Using an optimal correspondence of the elementary symbols of the Byzantine Music Notation in the keyboard keys of a PC, we can easily write Byzantine musical texts using the MS Word text editor. When this program is installed in a computer, a toolbar of 25 icons is appeared, in the environment of Microsoft Word. These icons are used for all necessary operations of writing the Byzantine Music Notation. The toolbar is activated from Menu:Projection\Tollbars.



The Microsoft Word Environment where the software Byzantinografos 2.0 is incorporated.

Developing, a software that combines the capabilities of Byzantinografos 2.0, as well as, all the functions of Microsoft Word, a powerful tool for Byzantine Music Notation manipulation is created, that is functional and efficient for anyone who is Byzantine Music expert. In the following we can see the toolbar of Byzantinografos 2.0.



Toolbar of Byzantinografos 2.0 in Ms Word 95 environment

Operating System *Windows, 98, NT, 2000, Xp*, and is used as a plug-in to the wellknown editor *Microsoft Word for Windows 97, 2000, Xp*.

We beleive that this system will give new impulse in the area of Byzantine and Traditional Folk Music, and will contribute considerably in the modernisation of publications, so that the current needs and the future requirements to be satisfied.

Dr. Gezerlis G. Velissarios
June 2004



DESCRIPTION of SYSTEM and Way of Installation

The system of writing of Byzantine Music Notation **Byzantinografos 2.0 (Byzantingrafos 2.0)** is constituted by 6 fonts that materialise all the cases of Byzantine Musical writing combinations (1. ByzMusic, 2. ByzMartiries, 3. BysFthoresDiseis, 4. ByzIsokratimata, 5. ByzGreekFonts 6. ByzMusicOldSymbols).



The system is installed as a plug-in in the Microsoft Word editor for Windows (97,2000,Xp, Greek or English version) and requires the existence of operating system Windows 98,2000, Xp, and also the installation of **English** and the **Greek** languages, from the **system locales and labguages** in control panel.

- Before starting the installation process the Microsoft Word editor must be installed in your system.
- Afterwards, insert the diskette of installation of **Byzantinografos 2.0** in driver **A:** in your PC.
- In order to install **Byzantinografos 2.0** you run the command **a:byzsetup.exe** from the **Start\Run**. More analytic description is presented in **ANNEX B** (pp. 31).

After the installation is completed, you activate the Microsoft Word editor. In the menu: **Projection\Toolbars** a new toolbar will have been added with the name **Byzantine Music**. Using this toolbar, as well as, the tables of correspondence of symbols of Byzantine Music and keyboard keys, that are found in **ANNEX A**, of this manual, you can write Byzantine musical texts.

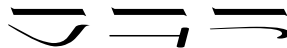
Let's make, however, an in detail description:

1. Using the ByzMusic font

- We can automatically return to the ByzMusic font by clicking with the mouse the 1st icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+1**. The selected size for these characters (font size) is 30. In case where the user requires bigger or smaller font size, he can simply change the font size from the Microsoft Word and then, if he want to fix this size for all the fonts of Byzantine music, he will have to click the 14th icon of the toolbar, that is .
- In the ByzMusic font the characters have been categorised in three types:
 - a. The **primary characters of type A**, when they are written they move the cursor in next place. Such a charaters are: “ISON”, “OLIGON”. “PETASTI” e.t.c. (see characters of **type A**, in Table 1.1, 1.2, Annex A).



- b. **Secondary of type B**, when they are written they don't move the cursor from the place that was found. Such characters are usually written **before a primary character of type A**, so the primary character is placed above or under them. For example “PSIFISTO”, “OMALON”, “ANTIKENOMA” e.t.c. (see characters of **type B**, in Table 1.1, 1.2, Annex A). In the following examples the primary character “OLIGON” is typed after the secondary characters.



- c. **Secondary of type Γ**, when they are written they don't move the cursor from the place that was found. Such characters are usually written **after a primary character of type A**, so as to be placed above or under it. For example, “GORGO”, the “KLASMA”, the “IPSILI” e.t.c. (see characters of **type Γ**, in Table 1.1, 2.0, Annex A). In the following examples first is written the “OLIGON” and afterwards the “GORGO”, “KLASMA” or “IPSILI”.



When we write a text we use the following rule:

- *First we write the characters of type B (if they exist).*
- *Afterwards the characters of type A.*
- *Then we place the characters of type Γ (if they exist).*

For example, for the following phrase:

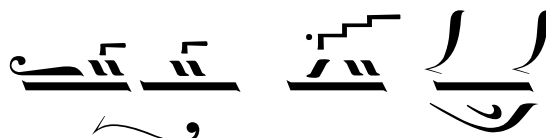


the “Psifisto” and “Antikenoma” is of Type B, the “Oligon”, “Ison”, “Petasti” and “Apostrofos” are of type A. The remaining symbols are of type Γ. So, if we want to write this musical phrase, we will have to type the characters with the following sequence (according to Table 1.1. of ANNEX A):

saazf:/d]///xs;h{ba[ds;

(“/” is the character “*small space*”, which is used to set a small space between characters).

For example, we can use the following sequence of key typing for writing the combinations below:



1. ISON (B), OLIGON (A), SINDESMOS (Γ), KENTIMATA(Γ), GORGO (Γ),
2. OLIGON (A), KENTIMATA (Γ), GORGO (Γ),
3. OLIGON (A), IPOROI (Γ), STIGMI (Γ), TRIGORGO (Γ), KENTIMATA (Γ),
4. PSIFISTO (B), left IPSILI (B), OLIGON (A), KLASMA (Γ), right IPSILI (Γ).


- Using this way of writing (based on Table 1.1. and 1.2 that it contains the equivalences of Byzantine symbols and the keys of keyboard), we can write all the musical combinations of Byzantine text.

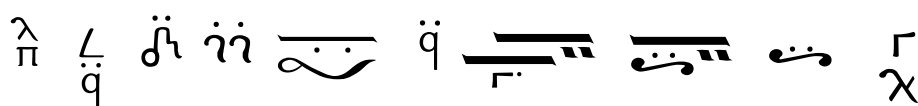
1.1 Possible problems using ByzMusic font

A. We must be sure that using the tables 1.1, 1.2 we set those symbols that will make the form of our text more readable e.g. in the following combinations the suitable “GORGO” is the 2nd one and the 4th one above the “OLIGON” and “IPOROI”. It is obvious that a user needs to be familiar with the tables 1.1 and 1.2 of Annex A. In the following example “GORGO” that suits more in a little it is what corresponds in symbol “[” of keyboard (Tables 1.1, 1.2).

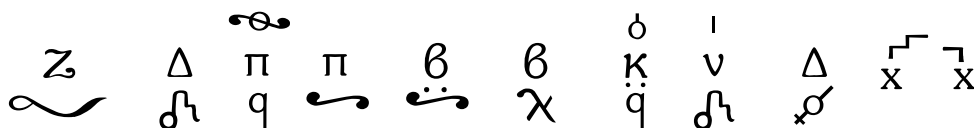


2. Using the ByzMartiries font

- We can automatically return to the ByzMartiries font by clicking with the mouse the 2nd icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+2**. The selected size for these characters (font size) must be the same as in ByzMusic font. This means that if we have already change the font size to be 42 (by pressing the 14th icon of the toolbar) during the use of ByzMusic font, then by changing font to ByzMartitries the font size will be also 42 pt.
- ByzMartiries font is also composed by characters of type A, B, and Γ. The way of writing is the same as the one described in ByzMusic font. First we write the characters of type B (if they exist). Afterwards the characters of type A. Then we place the characters of type Γ (if they exist).
- Using the ByzMartiries font we can write (based on Table 2 Annex A) “starting testimonies - Arktikes Martiries” e.g.:



or “simple testimonies” and “symbols of rhythm” in a musical text e.g:



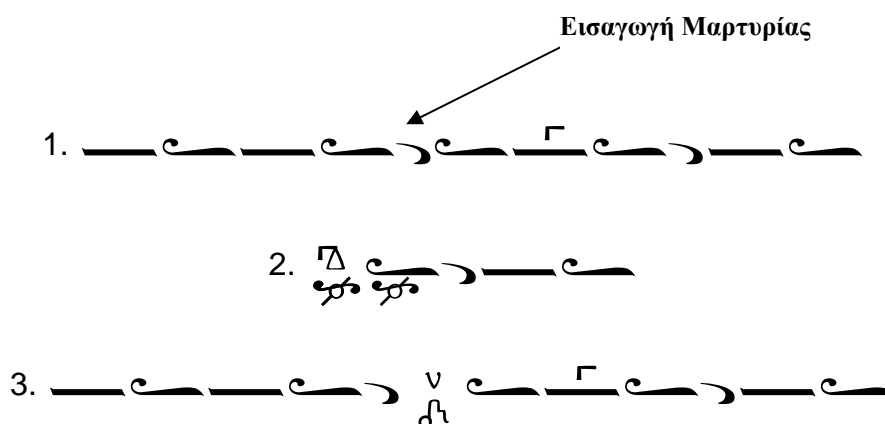
As we can see ByzMartiries font give the possibility of placing “fthores” above testimonies and of writing all the possible combinations of testimonies.

In the case where starting testimonies are written, other fonts such as ByzMusic, ByzGreekFonts, or other of greek characters e.t.c., have to be used. For example, in starting testimony below three fonts have been used: ByzGreekfonts (it will be described in the following), ByzMartiries and ByzMusic, regulating suitably the font size.




- In the case where we want to import, a posteriori, in a certain musical place a testimony, we return in this place and then we change to font ByzMartiries by

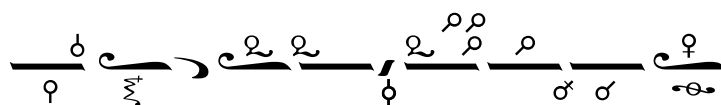
clicking the second icon or pressing Alt+2. Suppose that we have the line 1, as it appears below, and we want, in the place showed by the arrow, to change in font ByzMartiries, then, the problem of line 2 will be appeared (will change the writing due to peculiarity of windows that considers all the musical text as a word). In order to eliminate this problem, each time where we set the cursor in a certain place and want to change to the ByzMartiries font, just insert a “**small space**” (*small space*, is the character “/” of keyboard, that exists in all the fonts of category Byz...) in this place, in case this does not exist. Thus, we write line 3. (In the case where the problem of line 2 is presented we will have to make cancellations of previous commands (Undo - many times), untill we come back to the previous situation for continueing the writing). It would be recommended during the writing to separate the characters, using *small space* (e.g. Annex A), in order the text to be more readable.



We must say that the small interval “Small Space” (character “/”) is very essential in the case where we want to import small spaces between the characters of Byzantine Notation, so that to achieve the “right justification” or simply to make our text more readable.


3. Using the ByzFthoresDieseis font

- We can automatically return to the ByzFthoresDieseis font by clicking with the mouse the 3rd icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+3**. The selected size for these characters (font size) must be the same as in ByzMusic font. This means that if we have already change the font size to be 42 (by pressing the 14nth icon of the toolbar) during the use of ByzMusic font, then by changing font to ByzFthoresDieseis the font size will be also 42 pt.
- In ByzFthoresDieseis font we have only characters of type B and Γ. The way of writing is the same as the one described in ByzMusic font.
- Using the ByzFthoresDieseis font we can write (according to Table 3.1, 3.2 of ANNEX A) any symbol of “deteriorations - Fthores” – “recession - ifesi” and “diesis”, as well as the special symbols of “hroes”, in any place in the Byzantine text. In case where a symbol of ByzFthoresDieseis is inserted, a posteriori, in the musical text we use the same rule, described in section 2 for ByzMartiries, in order to eliminate the problem of “line 2” (see above).
- Each one of the symbols that belong to this font can be placed in *six* different places on a character of type A, except the recessions and the diesis that are placed in 4 places. The process of placement is the same with that of letters (ν, π, β...) of the ByzIsokratimata font (see below).



It is obvious that familiarization with the tables of annex A (3.1, 3.2) is required, in order that the user can write all the musical combinations that Byzantinografos 2.0 offers.

4. Using the ByzIsokratimata font

- We can automatically return to the ByzIsokratimata font by clicking with the mouse the 4rth icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+4**. The selected size for these characters (font size) must be the same as in ByzMusic font. This means that if we have already change the font size to be 42 (by pressing the 14nth icon of the toolbar) during the use of ByzMusic font, then by changing font to ByzIsokratimata the font size will be also 42 pt.
- In ByzIsokratimata font we have only characters of type B and Γ. The way of writing is the same as the one described in ByzMusic font.

- Using the ByzIsokratimata font we can write (according to Table 4.1, 4.2 of ANNEX A) “isokratimata” (Νη, Πα, ...) or double “Isokratimata” (Πα – Δι, Νι – Δι, ...), in any place in the Byzantine text. In case where a symbol of ByzIsokratimata is inserted, a posteriori, in the musical text we use the same rule, described in section 2 for ByzMartiries, in order to eliminate the problem of “line 2” (see above).




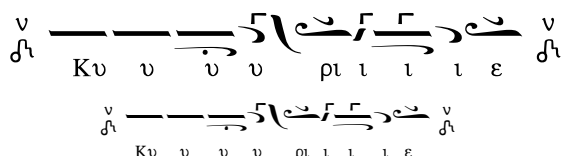
- Also, with this font we have the possibility of importing the letters (ν, π, β, Γ, Δ, κ, Ζ) in 6 different places around of a character of type A of ByzMusic font e.g.:



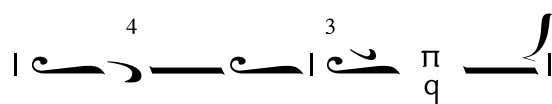
From this characters other are of type B and other of type Γ.

5. Using the ByzGreekfonts font


- We can automatically return to the ByzGreekFonts font by clicking with the mouse the 5th icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+5**. The selected size for these characters (font size) must be the same as in ByzMusic font. This means that if we have already change the font size to be 42 (by pressing the 14nth icon of the toolbar) during the use of ByzMusic font, then by changing font to ByzGreekFonts the font size will be also 42 pt.
- Using this font we can write a simple text below the line chant (the musical notation) or to add text in starting testimonies (e.g. Ήχος ... Πα or Γα e.t.c).
- It contains symbols (see Table 5, in Annex A) such as **λ, ς, μ, ς, ρ**, as well as, all the characters of Greek alphabet, e.g.:



- Also, with this font we can add rythms in the musical places of ByzMusic. For inserting the rythms, a posteriori, we will follow the rule that we described in the ByzMartiries section, e.g.:






6. Using the ByzMusicOldSymbols font

- We can automatically return to the ByzMusicOldSymbols font by clicking with the mouse the 6th icon  from the Byzantinografos 2.0 toolbar, or by pressing the keys **Alt+6**. The selected size for these characters (font size) must be the same as in ByzMusic font. This means that if we have already change the font size to be 42 (by pressing the 14nth icon of the toolbar) during the use of ByzMusic font, then by changing font to ByzMusicOldSymbols the font size will be also 42 pt.
- Using this font we can write (according to Table 6, Annex A) characters from the «**Old Byzantine Music Notation**», that are in use till our days from many Byzantine music teachers, such as: the «*oksia*», the «*isaki*», the «*tzakisma*», the «*piesma or double varia*», the «*ligisma*», the «*tromikon*», the «*strepton*» and the «*paraklitiki*», as well as some others symbols that can be used in traditional folk songs such as: «*tetragorgo*», «*pentagorgo*» και «*eksagorgo*». In case where a symbol of ByzMusicOldSymbols is inserted, a posteriori, in the musical text we use the same rule, described in section 2 for ByzMartiries, in order to eliminate the problem of “line 2” (see above).



7. Additional useful operations

Coloration

- Using the Byzantinografos 2.0 software byzantine music texts can be written in any size, as well in any form. For the use of colours the user can use the 7th, 8th and 9th icon  ,  ,  or the combination of keys Alt+7, Alt+8 and Alt+9 respectively. We can make changes from black in red or blue colour. If the user needs more colours he can use the colour functions of Microsoft Word.

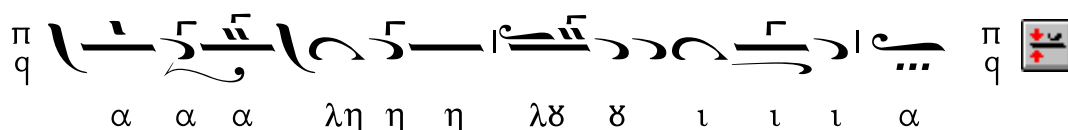
Scaling of text

- Also, if we think that our text is written with large fonts (or small) in size we have the possibility of selecting the text and decrease (or increase) its size, without any change.

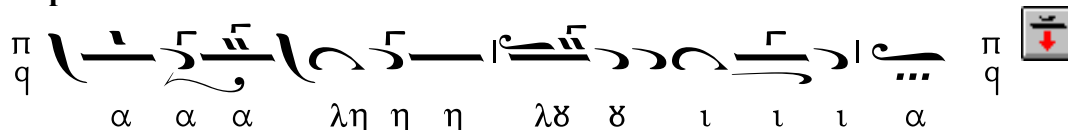
How we can decrease the distance between the music line and the “syllables” line

- Moreover, if the distance between the text lines is large we can decrease it from the space between the paragraphs of Microsoft word (Menu: Format\Paragraph and Line Spacing = Multiple, In = 0,7), (Proposed size for readable text is the: Line Spacing = 0.78 or 0,85 etc, it depends on how the user wants to format his text).
- In the case where a small Line Spacing (**0.7... 0.8**) is being set, we can use the following subset of icons that gives the possibility to bring closer the byzantine music text to the syllables below. For example, the 13th icon or “Alt+`” keeps distance constant. The 12th icon or “Alt+d”, lowers the line of byzantine music text at 10 points. The 11th icon or “Alt+s”, at 15 points and the 10th icon or “Alt+a”, at 25 points. The choice of one of the four icons (10th – 13th) affects all the fonts the Byzantinografos (except of the ByzGreekfont), so that all the fonts to have the same height.
- First, we select the byzantine line and then we click one of the 4 icons (10th – 13th)

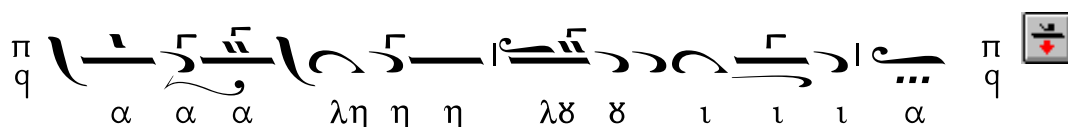
0 points:



15 points:





25 points:



Use of multiple Fonts

- Another very useful process is the possibility of using existing fonts in windows system in order to write “syllables” below the “chant” in the Byzantine Music Notation, or for adding text in any place, with the font of your own, eg, when we want to write a theoretical book of Byzantine Music. In this case we have created in Byzantinografos 2.0 a new characteristic in which we can preselect 5 fonts: *f₁*, *f₂*, *f₃*, *f₄* and *f₅*, by using the 17th, 19th, 21st, 23rd and 25th icons (from the Byzantinografos 2.0 toolbar) that appears with the red arrow from top to bottom.



- For example, we can select in Microsoft Word the font "Times New Roman" with size 14, Bold and Italic. Then we click the icon  to store the font with the characteristics (14, B, I). Whenever we want to use this stored font the only we have to do is to click the icon  that has the red arrow to from bottom to top or by pressing **Alt+f**. We have 5 pairs of such icons where we can store 5 different fonts that can be restore either by using the mouse or by pressing the shortcut keys: **Alt+f**, **Alt+g**, **Alt+h**, **Alt+j**, **Alt+k**. This operation is very useful for the writing of Byzantine Music books or Traditional songs that are usually required the interchange between Byzantine Music fonts and windows fonts.

In General

- Finally, if we want to write a symbol that belongs according to the tables in Greek (English) keyboard, we change first in Greek (English) keyboard and afterwards we write the symbol. All the symbols that appears in Tables (ANNEX A) with **black** colour do not used only in the cases appeared in tables (eg, “psifisto” in place “z” (English), table 1.1, can be written also under “ison”, “petasti”, e.t.c., and not only under “oligon”). This rule is applied to all characters.



- Using all the above recommendations of this manual, we can write our first Byzantine music text in computer, as it appears also in the following **written example**:

Ήχος Πα


^{Πα} υ ρ ι ε ε κ ε κ ρ α ξ α α π ρ ο ο ο ς σ ε ε ^π ^q

² ε ι σ α κ ϑ σ ο ο ο ο ν μ ϑ ε ι σ α α κ ϑ ϑ ^π ^q

^π ^q σ ο ο ν μ ϑ ϑ Κ υ υ υ ρ ι ι ι ε Κ υ ρ ι

^ρ ⁴ ε ε κ ε κ ρ α α ξ α π ρ ο ο ς σ ε ε ε ι σ α κ ϑ ^π ^q

³ ^{Ζω} ^{Πα} ^ρ σ ο ο ο ο ν μ ϑ ϑ ϑ π ρ ο σ χ ε ς τ η φ ω ν η η η η ^π ^q

^{Πα} ^{Πα} ^ρ ^π ^q τ η η η ς δ ε η η σ ε ω ω ω ω ς μ ϑ ε ν τ ω

^{Πα} ^ρ ^π ^q κ ε κ ρ α γ ε ν ε μ ε π ρ ο ο ς σ ε ε ε ε ε ε ι σ α κ ϑ

⁴ σ ο ο ν μ ϑ Κ υ υ υ υ ρ ι ι ι ι ε

Similar text, with smaller font size:

Ἦχος $\frac{6}{q}$ Πα

Πα
Κ α τευ θυ νθη η η τωη προ ο ο σε ευ χη
 η η μδ ως θυ μι α α μα α α ε νω
 ω πι ο ο ο ον σδ ε παρ σις τω ων χει ει
Γα Πα
 ρω ων μδ θυ σι α ε σπε ρι ι νη η ει σα
 κδ σον μδ Κυ υ υ υ ρι ι ι ι ε

Moreover, we can write with the same way the *Traditional folk Songs*, “*Kalanta*”, e.t.c (e.g. *exercises* in theoretical books, *insets* in CDs and other).

With this new system we can create fast and easy Byzantine musical texts of any form (e.g. coloured) and size that will be always readable, and beautiful written.



ANNEX A.

TABLE 1.1: ByzMusic font (Alt+1), in English keyboard.

Key	1	2	3	4	5	6	7	8	9	0	-	=+	\
Shift + Key													
Type	A, Γ	B, Γ	Γ, Γ	Γ, Γ	Γ, Γ	B, B	Γ, Γ	B, B	Γ, Γ	A, A	Γ, Γ	Γ, Γ	A, A

Key	Q	W	E	R	T	Y	U	I	O	P	{	}
Shift + Key												
Type	Γ, Γ	Γ, Γ	Γ, B	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ

Key	A	S	D	F	G	H	J	K	L	“	”
Shift + Key											
Type	A, A	A, A	A, A	A, A	A, Γ	A, Γ	A, A	A, A	Γ, B	Γ, Γ	Γ, Γ

Key	Z	X	C	V	B	N	M	<	>	/?
Shift + Key										
Type	B, Γ	A, A	Γ, B	Γ, Γ	B, B	B, B	Γ, Γ	Γ, Γ	Γ, Γ	A, Γ

(*): In Greek keyboard the symbol is written by pressing “ ; + space”

TABLE 1.2: ByzMusic font (Alt+1), in Greek keyboard (Alt+Shift ή Ctrl+Shift).

Key	Q	W	E	R	T	Y	U	I	O	P
Shift + Key										
Type		Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ

	A	S	D	F	G	H	J	K	L
Key									
Shift + Key									
Type	Γ, Γ	A, Γ	A, A	A, A	Γ, Γ	Γ, A	B, Γ	Γ, Γ	Γ, Γ

	Z	X	C	V	B	N	M
Key							
Shift + Key							
Type	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	B, B	B, B

TABLE 2: ByzMartiries font (Alt+2), in English keyboard.

	1	2	3	4	5	6	7	8	9	0	-	=+	\
Key													
Shift + Key													
Type	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, B	Γ, B	A, B	Γ, Γ	Γ, Γ

	Q	W	E	R	T	Y	U	I	O	P
Key										
Shift + Key										
Type	B, B	A	A, A	A	A, A	A, A	A, A	A, A	A, A	A, A

	A	S	D	F	G	H	J	K	L	‘«
Key										
Shift + Key										
Type	B, B	B, B	A, A	B, B	A, A	A, A	B, B	A, A	B, B	Γ

	Z	X	C	V	B	N	M	<, >	/?
Key									
Shift + Key									
Type	A, A	B, B	B, B	B, B	A, A	A, A	Γ, Γ	Γ, Γ	A, Γ

TABLE 3.1: ByzFthoresDiseis font (Alt+3), in English keyboard.

	`	~	1	2	3	4	5	6	7	8	9	0	-	=+	\
Key															
Shift + Key															
Type	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ	B, Γ

	Q	W	E	R	T	Y	U	I	O	P	{	}
Key												
Shift + Key												
Type	B, Γ		B, Γ	B, Γ	B, B	B, B	B, B	B, Γ	B, Γ	B, B	B, Γ	B, Γ

A S D F G H J K L ; , ‘ “

Key												
Shift + Key												
Type	B, B	B, B	B, B	B, B	B, B	B, B	B, B	B, B	B, B	Γ, B	B, B	

Z X C V B N M < , > / ?

Key												
Shift + Key												
Type	B, B	B, B	B, B	B, B	B, B	B, B	B, B	B, B	B, B			small space

TABLE 3.2: ByzFthoresDiseis font in Greek keyboard (Alt+Shift ῑ Ctrl+Shift).

	Q	W	E	R	T	Y	U	I	O	P
Key	ρ		ρ	ρ	σ	σ	σ*	ι	ο	ρ
Shift + Key	ρ		ρ	ρ	σ	σ	σ*	ι	ο	ρ
Type	Γ, Γ		Γ, Γ	Γ, Γ	B, B	B, B	B, B	B, Γ	B, Γ	B, Γ

	A	S	D	F	G	H	J	K	L
Key	ρ	ρ	ξ	ξ	φ	φ	ξ	ρ	ρ
Shift + Key	ρ	ρ	ξ	ξ	φ	φ	ξ	ρ	ρ
Type	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B

	Z	X	C	V	B	N	/ ?
Key	ρ	ρ	ρ	ρ	ρ	ρ	small space
Shift + Key	ρ	ρ	ρ	ρ	ρ	ρ	
Type	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	Γ, B	

TABLE 4.1: ByzIsokratimata font (Alt+4), in English keyboard.

	1	2	3	4	5	6	7	-	=	+	\	
Key												
Shift + Key												
Type												

	Q	W	E	R	T	Y	U	I	{	}
Key										
Shift + Key										
Type										

	X	C	N	P	B	G	D	K	Z	M	? /
Key											
Shift + Key											
Type											

TABLE 4.2: ByzIsokratimata font (Alt+4), in Greek keyboard (Alt+Shift ή Ctrl+Shift).

Key											
Shift + Key											
Type											

TABLE 5: ByzGreekFonts font (Alt+5), in English keyboard (*)

	A	S	D	F	2	3	4	5	6	7	8	9
Key	l	ς	ι	⋈								
Shift + Key	?				2	3	4	5	6	7	8	9
Type	A, A	A	A	A	B	B	B	B	B	B	B	B

	W	E	R	T	Y	U	I	O
Key	2	3	4	5	6	7	8	9
Shift + Key								
Type	Γ	Γ	Γ	Γ	Γ	Γ	Γ	Γ

(*) ByzGreekFonts font (Alt+5), in Greek keyboard is a common greek font.

TABLE 6: ByzMusicOldSymbols font (Alt+6), in English keyboard.

	1	2	3	4	5	6	7	8	9	0	-	=+	\
Πλήκτρο													
Shift + πλήκτρο													
Τύπος	A, A	B, B				Γ, Γ	Γ, Γ	B, B	B, B	B, B	A, B	Γ, Γ	A, Γ

	Q	W	E	R	T	Y	I	O
Πλήκτρο								
Shift + πλήκτρο								
Τύπος	B, Γ	Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ

	A	S	D	F	G	H	J	K	L	‘	«
Πλήκτρο											
Shift + πλήκτρο											
Τύπος	A, A	A, A	A, A	Γ, Γ	Γ, Γ	Γ, Γ	B, Γ	Γ, Γ	Γ, Γ	Γ, Γ	Γ, Γ

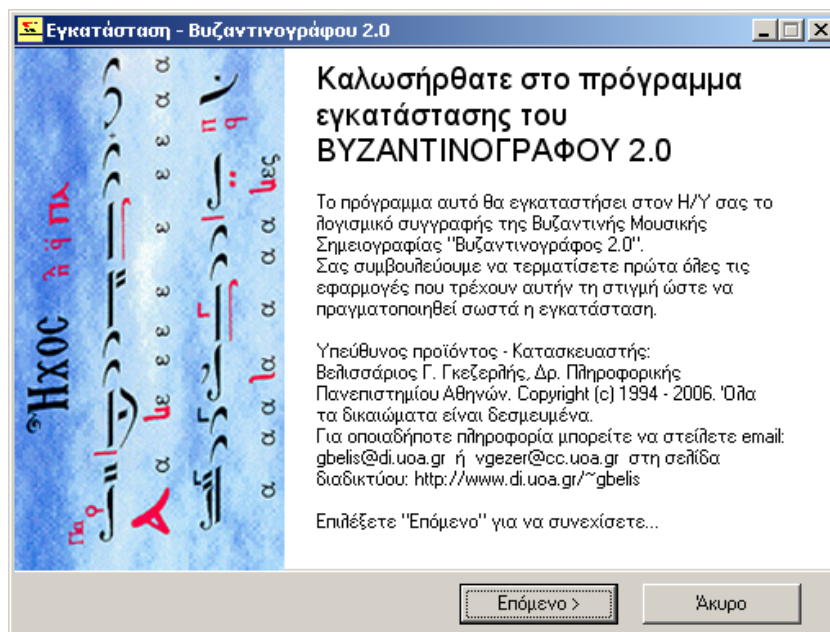
	Z	X	C	V	B	N	M	< ,	>	/ ?
Πλήκτρο										small space
Shift + πλήκτρο										
Τύπος	B					B	Γ, Γ			

ANNEX B

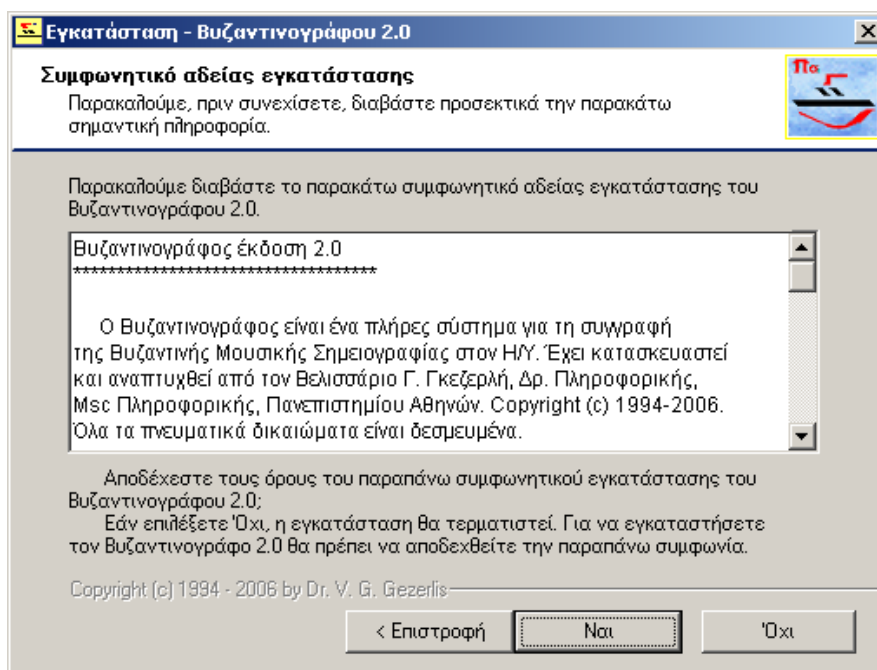
Installation Program of Byzantinografos 2.0

Run the **byzsetup.exe** then:

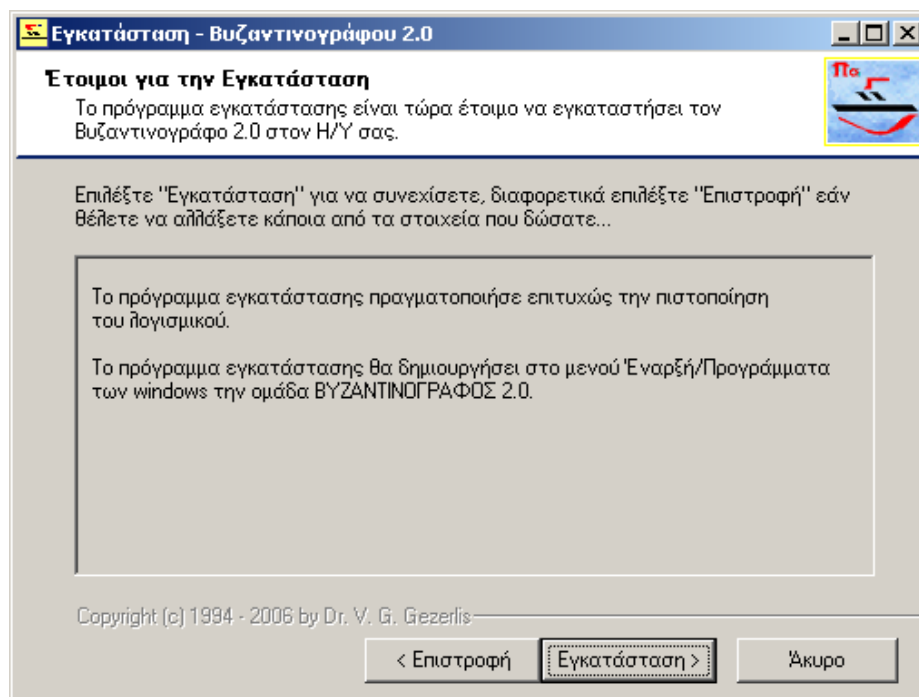
- **Step 1:** Select «Επόμενο» “Next” to continue.



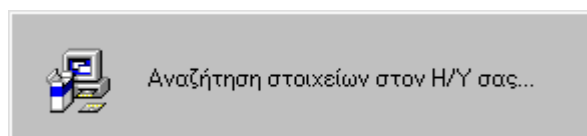
- **Step 2:** Select «ΝΑΙ» “Yes” if you accept the installation terms in Readme file.



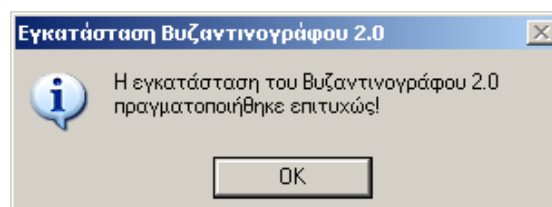
- **Step 3:** Select «Εγκατάσταση» “Installation”.



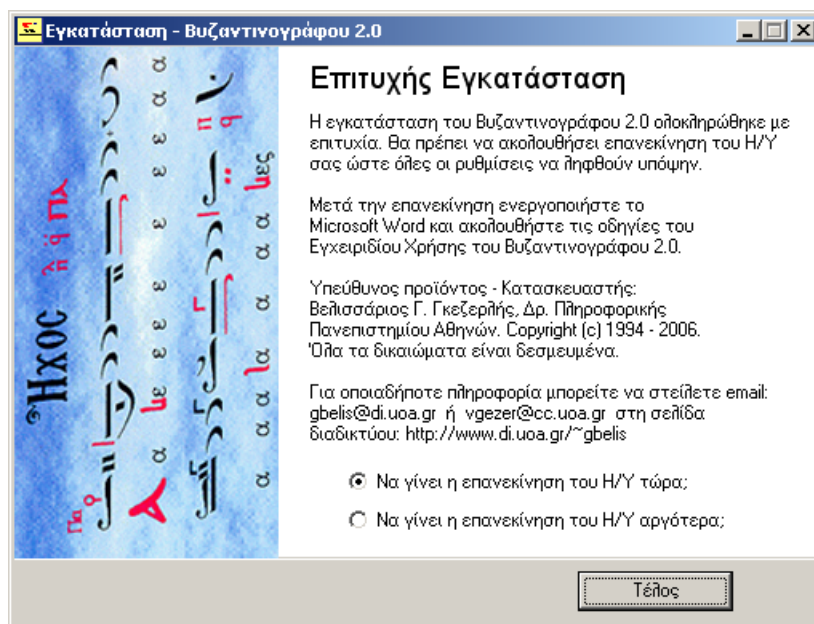
- **Step 4:** The installation program search for installed components of Microsoft Word. Wait until the installation is finished.



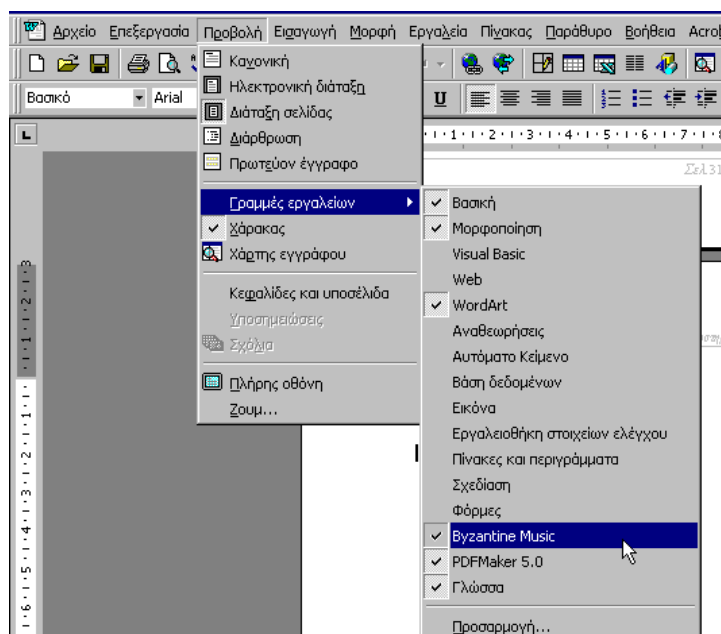
- **Βήμα 5:** Message of successful installation, press OK..



- **Step 6:** select «**Να γίνει η επανεκκίνηση του Η/Υ τώρα**» “restart now” and «**Τέλος**» “finish”, in order to restart your system.



Step 7: After a successful installation, open Microsoft Word and in the menu Projection\Toolbars\Byzantine Music check for activation (in word 2000-2003).

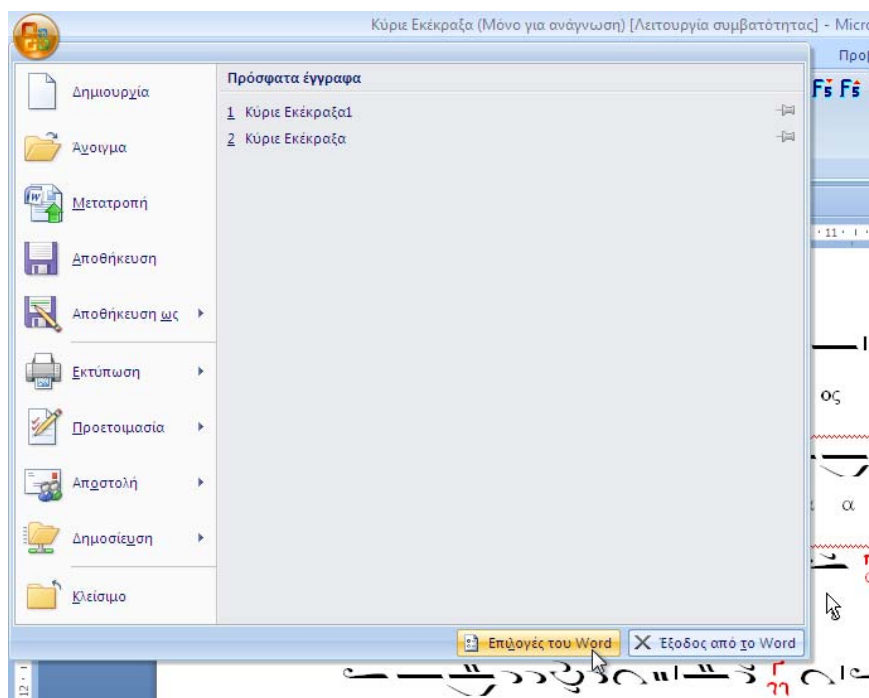


- **Step 8:** If you have the MS Office 2000, XP or 2003 then open the MS Office environment and a) go to menu “Tools\Macros\Security”, then select the forth selection “low level security”, then select OK. b) Go to menu Tools\Auto Correction and uncheck the 5 checked selection, then press OK. c) Go to menu “File” and select “Exit”. The Byzantinografow 2.0 is ready for use.
- ❖ **Step 9:** If you have Office 2007 or 2010 then:

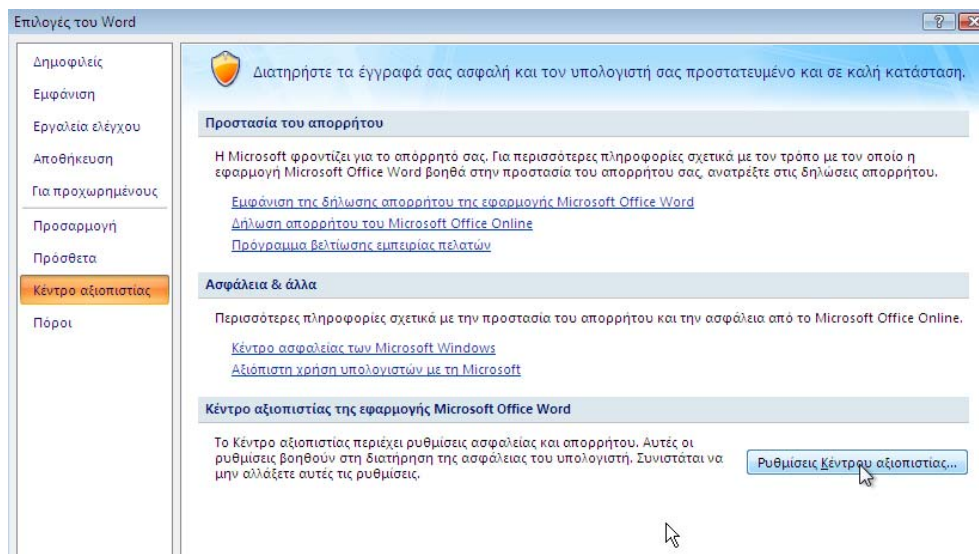
- ❖ go to menu “**Add-Ins**”, the Byzantingrafos 2.0 toolbar must be appeared like the image below.



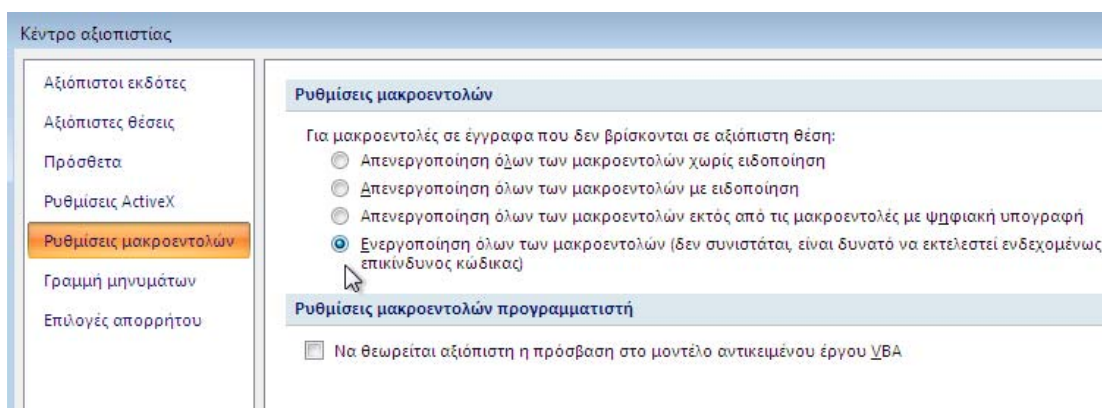
- ❖ Go to basic menu of Word and then select “**Word Options**” button.



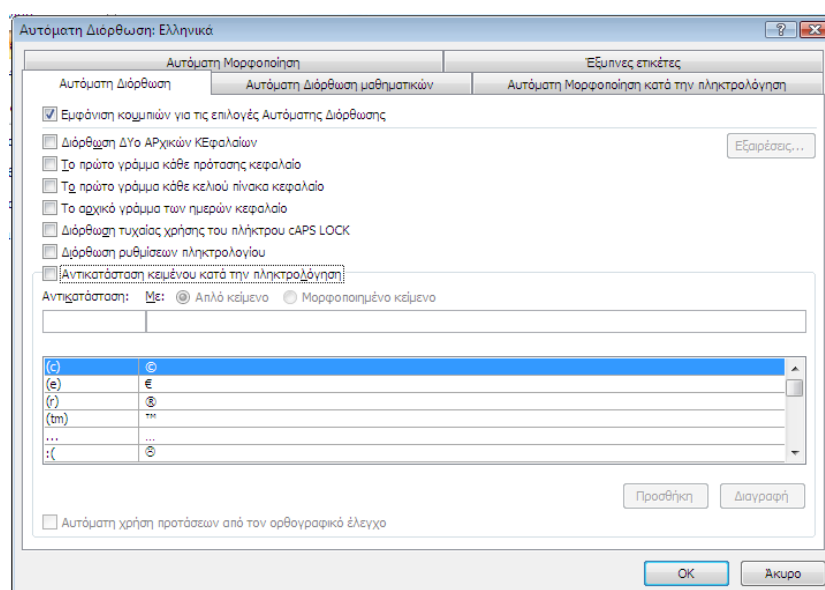
- ❖ Next go to “Trust Center”, and select “Trust center settings”.



- ❖ Select “Enable All Macros” and press «OK».



- ❖ Go to Basic Word Menu and select “Word Options”, and then “Tools” and then select “Auto correction options” and uncheck the 7 checks and press «OK»:



- ❖ Go to basic Word menu and select Word Exit. Then open word again and the Byzantinografos 2.0 is ready for use.
- ❖ **Step 10:** Start using the Byzantinografos 2.0, reading carefully the instructions manual.

Have a good work!

