1 Documentation for the BMMusic Editor

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1 Introduction

The BMMusic Editor (Byzantine Music Editor) is a GUI that offers the user the ability to type all the commands of the byzantinemusic package without errors and at high speed. It is written by Mr. Zisis Tsiatsikas, a doctoral candidate of the Department of Information & Communication Systems Engineering of the University of the Aegean using the Java language, in collaboration with the designer of byzantinemusic package

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assistant professor Cornaros Charalampos. If you have installed Java Run-
time 8 or later then you could run the BMEditor.jar by double clicking
it or using the terminal.

2 Description of the editor

The editor consists of a main menu, from which we can choose any
of the following buttons: Musical Symbols, Martyries-Isokrathmata-Stavros,
Init. Martyries- Tempo Signatures and Measures-Fthores.

Pressing one of the above buttons, we enter a new menu that contains
several auxiliary buttons. For example, if we choose to press “Musical
Symbols”, we will get the following table of buttons of “Musical Symbols”.

The corresponding command is pasted into the middle text field, by
pressing any one of those buttons e.g. the third one on the top row (the
“oli”). At the same time, the (most of the) alternations (that begin with
this command) are displayed in a transparent frame. For example, oli,
olit, olig, oldi ... are all permitted commands that begin with the prefix oli.
Pressing one of these, we change the command displayed in the middle field. If our intention were to write a very simple command, like the command \oli then we have almost finished: We just check the \ of the checkbox on the left of the middle text field, write a syllable in the lower field, for example, the word “test” and press the middle Enter button. We will see the final result in our large window at the bottom: \th{\oli}{test}. The “\th” is one of the many commands of the byzantinemusic package to enter the notes with the corresponding syllables in our text. If we have already installed the above package in our system, then we could press the Run button and after a while the PDF button and then we will have the opportunity to see the results we get using the Xe\LaTeX machine.

Comment.
If we don’t see any pdf file been created, we will need to edit a file named
BYZANTINE-MUSIC-EDITOR.conf
located in the same folder as the BMEditor.jar file. As we can see, the first line is the PATH = xelatex. Instead xelatex, we should write xelatex.exe, if we are working on Windows. Generally, we should define the appropriate path of the Xe\LaTeX engine on the right of the =. Then we save the new conf file and press Run. If we have not yet managed to see our pdf file, then we could open the byzantinemusic-temp.tex file that was generated using the editor and run it with Xe\LaTeX engine and check for all possible errors.

3 Fast and slow usage of the BMEditor
The main purpose of BMEditor is to type our commands with the minimum effort and therefore managing better typing speed. The most common commands are \th, \barth, \syn and other similar commands. If we want to use \barth instead \th, eg, \barth{\oli}{test}, then we will need to tick the barth option on the right before pressing the Enter button. If we want to enter the \th or \syn, or any other command instead of \th then we should check the th2 check box and put in the
adjacent field the command \textit{lth}, syn or any other command we desire. We go back to the use of \textit{“\textbackslash th”} command just un-checking the \textit{th2} or \textit{barth} checkbox.

There are some complicated cases of musical symbols combinations that do not correspond to any of the pre-defined commands of byzantine-music package. For example, there is no command to put the \textit{“\textbackslash kediaf thora”} above the \textit{“\textbackslash oli”}. In this case, we simply type \textit{“\textbackslash kediaf”} after typing the first command \textit{oli} and press the Enter key.

![Image of music symbols combination]

We will get the output

\textit{\textbackslash th\{oli\textbackslash kediaf\}\{any syllable\}} i.e. \Rightarrow \textit{any syllable}.

This is the fastest way of typing complex musical commands. We should be very familiar with the use of the package and quite careful of what and where the output is pasted inside the large lower window. Any syntax error will produce no output! For example, the \textit{\textbackslash th\{oli \textbackslash kedia\}\{any syllable\}} would naturally create a problem because there is no command named \textit{\textbackslash kedia}. We could confirm this by pressing the Measures-Fthores menu and write in the middle text field the word \textit{kedia}. As we can soon see, there are many options starting with \textit{kedia}, like \textit{kediaf, kediafA, and}}
kediafD, but there is no kedia command! In such cases, it is better to use the slow input method of inserting musical commands. Following this method, we build any musical combination step by step using the top text field. First, we check the up arrow checkbox and then type our first command eg. oli. The \oli command rises on the top text field after pressing the Enter key. Then, we continue writing another command in the middle text field, such as the “kediaf” command, having selected the appropriate menu (in this case the Measures-Fthores).

![Musical Input Interface]

The result goes up after pressing the Enter key and we get the \oli \kediaf combination. We could continue building a whole musical combination of commands one after the other. Once we have built up our musical combination and have written the syllable in the appropriate field, then we can pass them into the main window by pressing the Enter button on the right of the upper input field or by pressing the Alt C key combination. If we have made a mistake we could fix it using X button before pressing the Enter button.

**Comment**

The [ ] checkbox is useful when you want to enter commands that should be put in square brackets, eg. the \bm[\kediaf, 0.1]. In such cases, we first insert the outer command (eg. \bm) into the top text field and then we write kediaf, 0.1 in the middle of the field and check the [ ] checkbox.
The \kedliaf, 0.1 will come next to the previous \bm once we press the Enter button. In this way, we will get the right result \oli \bm [\kediaf, 0.1] with the minimum typing effort. The 2Gr button is useful when we want our syllables be exclusively inserted in Greek even if we use the Latin keyboard in the lower input field.

4 Some useful shortcuts

Using the Alt K key combination brings us to the middle text field while using the Alt L combination to the middle bottom field. With Alt M we go to the bottom large window.

5 License Information

The byzantinemusic package is intended for personal use under the GPLv3 or later license. We aim at the individual user and lover of Byzantine music, the easy writing of musical texts and the free exchange of musical documents between the users of the package. Also, we aim at the research of traditional and church music and the construction of a large data base of Byzantine Music texts that will be hosted by the Aegean University, Greece. We would like you to indicate “this text was written using the byzantinemusic ©Cornaros 2016” in any text written using the BMMusic editor and/or byzantinemusic package.

For any comments, musical texts that you have built and want to send us, or any partnership request for the byzantinemusic package or BMMusic Editor improvement you could send email to the authors.