

Preliminary Documentation for MicroIMP 1.0.

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1 The Concept

The idea behind MicroIMP is to reconcile two so far disjoint worlds: the World of the Word Processors and the World of quality technical typesetting.

In the World of the Word Processors, where Microsoft Word (tm) rules, the document are easy to make and no learning cycle is required; but the document are often lack in quality and the easiness comes at the cost of sacrificing features.

In the World of Quality Technical Typesetting, where \TeX rules, features and quality are abundant; but the learning cost turns off most of the new users dooming \TeX to the niche enthusiast market.

Enter MicroIMP: an intuitive WYSIWYG document preparation system, based on \LaTeX .

MicroIMP delivers easiness: no \TeX markup needs to be learned; no commands, and no backslashes. WYSIWYG. Ready to use the moment you run it. Don't struggle with the syntax, but Imp with Impunity.

MicroIMP delivers power: it is based on a \TeX kernel and incorporates \TeX formatting techniques; these include math, hyphenation, automatic ligatures, and

much else. As MicroIMP grows, more \TeX / \LaTeX features would be added – without any burden on the user.

Note: Hardcore \TeX users should not be disappointed by the above: there is a way to enter commands and \backslash 's in the document...if you so insist. Read on.

2 MicroIMP Overview

MicroIMP has a typical Word Processing look and feel: you can enter the text right away, and use the formatting commands from the menus to change its appearance. Most of the menu commands are intuitive and no additional documentation is needed to explain them.

MicroIMP features include

- Full WYSIWYG interface.
- Spell.
- Multiple language support (English, German, Dutch, Italian, French – as of version 0.1.0)
- Table of Contents generation.
- Index generation.
- References.
- Spell checking.
- Accent command support (for entering rare accented words in English, like *naïve*).
- Lists, including itemizing, enumerating and description (build 012).
- Tables.
- Mathematics.
- Equation numbering.
- Box rotation and scaling.
- Graphics inclusion (all common bitmap formats.)
- Trees.
- Hyperlinks.
- Copy/Paste of text, markup, and images.
- Read/Write blocks of text (build 010).

- Saving in PDF/PS format (*Generate* option.)
- Saving as \LaTeX (*Save as $T_{\text{E}}X$* option.)
- Support for the $T_{\text{E}}X$ -standard CM fontset, and a number of alternatives.
- RTF import (as of build 011).

3 Installing MicroIMP

To install μImp , please run the `winstall` installation program. Observe that the installer component list may list some of the components not present in this distribution; these optional components (Fontsets and Dictionaries) are explained below in this document.

After the installation has been completed, you will have a desktop shortcut to μImp .

4 Updates

Before using μImp you may want to ensure that you are actually using the latest available version.

For information about the program development, make sure to sign on to the μImp forum, <http://www.microimp.com/forums/>). Forum users will be sent μImp news as new versions are released.

To quickly check if your version is the latest, run μImp and select **Help**→**MicroIMP on the Internet**.

This will download and display the latest news page from the μImp site.

5 MicroIMP Documents

MicroIMP is based on XML as much as it is based on \LaTeX ; and this is not only because of the current fashion on XML.

You see, \LaTeX has a problem: it is very easy to type in incorrect documents: you can mistype a command name, give it a bad argument, forget a brace, insert an extra brace, or do one of the other myriad wrong things. To a \LaTeX user, they usually do not present a problem: a compilation run would deliver an error, and the user would fix it; but compilation errors are a major problem for a user not given the insight into the $T_{\text{E}}X$ syntax and not willing to spent time and energy researching the proper syntax. Worse yet, compilation errors are a problem for a production system: it is nonsensical to allow a WYSIWYG wordprocessor crash on bad syntax.

Therefore, MicroIMP avoids the very possibility of errors: it simply does not allow the user to enter something that cannot be processed. The primary

technique used is to restrict MicroIMP documents to valid, “distilled” form of \LaTeX .

And, if you have been wondering, *Why do we call it **MicroIMP**?* – well, **MicroIMP** is simply the abbreviation of **MicroPress’ Interactive Markup Processor**.

MicroIMP documents are XML and thus, ASCII; this allows to use third-party tools to edit them or process them in other ways. Of course, we do not suggest learning tags to use a text editor for entering XML: MicroIMP is a WYSIWYG system that can do it much easier and allow the results to be seen right way.

But if a MicroIMP document gets damaged, a text editor might be just the tool to fix it; and conversion utilities from TML to other XML dialects are bound to appear one day.

6 MicroIMP Tags; The Property Inspector

The MicroIMP format is shown to the user as XML, even if it may be quite different inside the program; and in a few key places it may be helpful to think about the document as XML.

It often happens within a Word-processing environment that it is not entirely clear where the cursor really is: if it sits on the border between normal and bold font, and we start typing in, would the new text become normal or bold? In MicroIMP, there are other situations: where are we exactly if the cursor sits on the border between text and math? Of course, you can try entering to see what would happen, but with MicroIMP there is a simpler way: look at the status bar below.

It always shows the XML nodes before and after the cursor. For example, if the status bar shows

```
x      <math>
```

then we are in text, just before the `<math>` opening tag; typing now would produce regular text. However, moving cursor right would change the status bar to

```
<math> x
```

without cursor itself seen moving; and now, we would be entering at the beginning of an equation.

The same logic applies to the font attributes: if the cursor is located between two characters with different attributes, for example a bold X and an italic Y :

```
<b>x</b> | <i>y</i>
```

then the status line shows either the attributes of x , or the attributes of y . If the currently shown attribute is **bold**, then any text typed in now will also appear in bold. Here, pressing Cursor-Right once will not change the physical position of the cursor, but will change the current attributes to that of the next character

(y); pressing Cursor-Right once again will indeed move the cursor beyond *y*. Likewise, pressing Cursor-Left once will change the current attributes to that of the character to the left.

Notice that this behavior is different from most of word processors (MS Word, for example, always uses the attributes of the character to the left of the cursor). Cursor is used for changing the attributes only if the attributes of the two neighbouring characters differ; if the two characters are identical, the Cursor-Left and Cursor-Right will always physically move the cursor.

More interesting use of tags is the MicroIMP's Property Inspector: it shows the tags "we are at or in" together with their properties; the properties can be edited.

For example, if we insert a graphics file into the document, position the cursor just after it, and open the Property inspector, it would show the three properties of the image: the file name, the width and the height. All fields are editable: you can replace the image with another one, or scale it horizontally (width), or vertically (height).

7 For Advanced Users: Raw T_EX

Being based on T_EX, MicroIMP allows inclusion of T_EX/ code straight into the document; this can be done with the Insert/Usercmd command.

Inserted T_EX code can be either active or inactive; make sure that the **Apply** box is checked to the code to be executed. When Active, T_EX inserts are fed into the MicroIMP formatting machinery.

Of course, allowing arbitrary T_EX code within a MicroIMP document carries some risks: it is easy to mistype T_EX code. MicroIMP defends against this as follows: if user commands cause an error, they are **all** immediately disabled; the user would need to reexamine them and turn them on manually.

User commands must be entered with the **Apply** box off: since MicroIMP reacts to the changes in the properties instantly, a half-typed command would cause an error; only after the code of the user command has been fully entered, should the **Apply** box be turned on.

While you can enter *text* inside a User Command, doing this defeats the entire idea of MicroIMP: such text cannot be visually edited.

The main utility of User Commands is to enter the commands that access T_EX features that MicroIMP interface does not yet implement. One example of such feature is the T_EX Hanging Indentation:

Type a paragraph of text (at least several lines), position the cursor inside the paragraph, and Insert a user command with the code:

```
\hangindent2in\hangafter-3
```

The \parshape specifications can be used similarly, and so are many of other T_EX commands not present in MicroIMP menus.

Of course, to enter User Commands, you should know them; and, just like with L^AT_EX/ itself, it is not always predictable when a particular command would

work or would cause the document to fail. We view User Commands as an experimental feature, and you are generally on your own in figuring out which commands would work and which would not.

8 Adding Fontsets

In addition to the default Computer Modern, MicroIMP supports several other font families:

- TM Math
- HV Math
- BA Math
- PA Math
- CH Math
- IF Math
- CM Bright
- Concrete

Use the **Layout**→**Fontset** menu option to switch to alternative families.

The optional fontsets are not included in the MicroIMP distribution (and FontSet switching is thus not available with the bare-bone system); to install them, $\text{V}\text{T}_{\text{E}}\text{X}$ users should follow these instructions:

- Copy the required packages from the $\text{V}\text{T}_{\text{E}}\text{X}$ / distribution CD to the MicroIMP installation directory.
- Run MicroIMP installer and select the desired font options. Observe that available options in the installer are shown in black, and unavailable in blue. Once the installation has been completed, the fonts would be visible to MicroIMP.

Note: For TM Math, HV Math, BA Math, PA Math, CH Math, and IF Math, any recent 8.x $\text{V}\text{T}_{\text{E}}\text{X}$ / distribution can be used; for CM Bright and Concrete, you must use the 8.5 or later distribution (earlier distributions were not configured in the way MicroIMP requires.). Upgrade to 8.5 can be obtained from MicroPress (<http://www.micropress-inc.com/forms/orderform.html>).

Note: For CH Math you should also install the fntaddon package; it is included in the IMP distribution and listed in the menu.

9 Adding Dictionaries

μ Imp distribution includes only the US English dictionary; additional dictionaries (German, Dutch, French, Italian) can be found on the V_TE_X CD.

To install the additional dictionaries, copy the following files from the V_TE_X CD to the μ Imp installation directory:

- Dutch: dctdut.pgm, dctdut.001
- French: dctfre.pgm, dctfre.001
- German: dctger.pgm, dctger.001
- Italian: dctita.pgm, dctita.001

and run μ Imp Installer (**winstall.exe**), selecting the appropriate dictionaries from the menu.

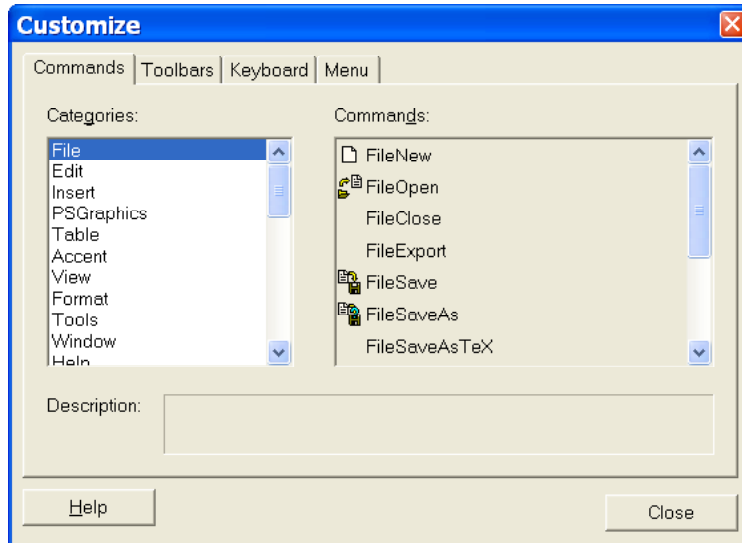
10 Customize

This dialog box is brought up when you choose [Setup]/[Customize] from the μ Imp menu. Another way to invoke the Customize dialog box is the right-click on a toolbar or menu and then select [Customize] from the pop-up menu.

The Customize dialog box allows to change menus, toolbars, and commands.

11 Customizing Commands

This panel allows to add commands to menus or toolbars.



The control fields of this dialog are:

[Categories] Display categories of commands organized by menu name or type. Click a category to change the list of commands in the Commands box.

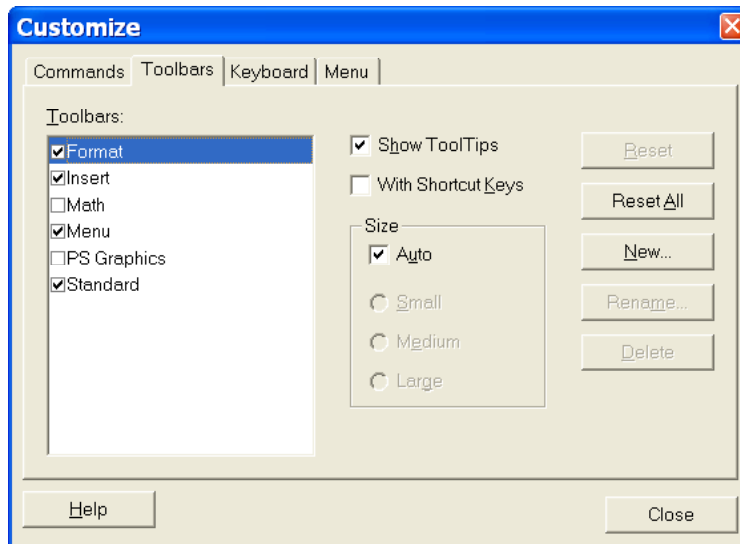
[Commands] Display the list of commands for the category selected in the Categories list box. For a description of a command, select the command and see the description of a commands in the Description field.

To add a command to a toolbar, select the desired command in the Commands box and drag the command to the toolbar.

To add a command to the menu, select the desired command in the Commands box and drag the command from the Commands box and without releasing the mouse, rest it over the menu you want to change. When the menu displays a list of commands, point to where you want the command to appear, and then release the mouse.

12 Customizing Toolbars

This panel allows to customize existing and add news toolbars to the μ Imp.



The control fields of this dialog are:

[Toolbars] List all available toolbars.

[Show Tooltips] Toggle this checkbox to show or hide tooltips for the toolbar selected in the Toolbars list.

[With Tooltips] Toggle this checkbox to display or not to display keyboard shortcuts for the toolbar's commands in tooltips. This button is disabled, if [Show Tooltips] checkbox is disabled.

[Size] Changes the size of the toolbar or menu selected in the Toolbars list.

[Auto] The toolbar or menu size is set by the μ Imp automatically depending on the screen resolution. This is the default setting for all toolbars or menu.

[Small] Sets the small size of the toolbar or menu.

[Medium] Sets the medium size of the toolbar or menu.

[Large] Sets the large size of the toolbar or menu.

[Reset] Remove any changes you made to the selected toolbar or menu and restore the factory settings.

[Reset All] Remove any changes you made to all toolbars and menus and restore the factory settings.

[New . . .] Create a new toolbar. To create a new toolbar

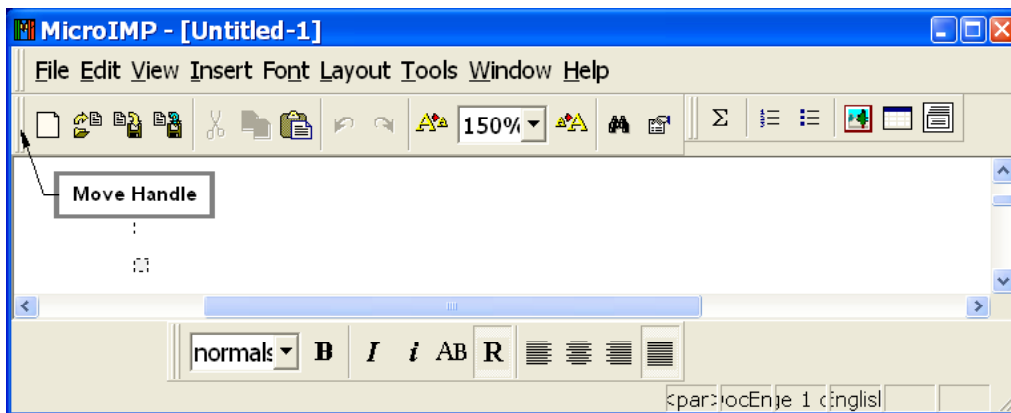
1. Press the [New . . .] button
2. In the Toolbar Name box, type the name you want.
3. Drag the appeared empty toolbat to the desired place on the μ Imp desktop.

Now you can add commands the new toolbar as to any other μ Imp toolbar.

[Rename . . .] Change the name of the toolbar selected in the Toolbars list. Only user's toolbars can be renamed.

[Delete . . .] Remove the toolbar selected in the Toolbars list. Only user's toolbars can be removed.

To move a toolbar, drag the move handle

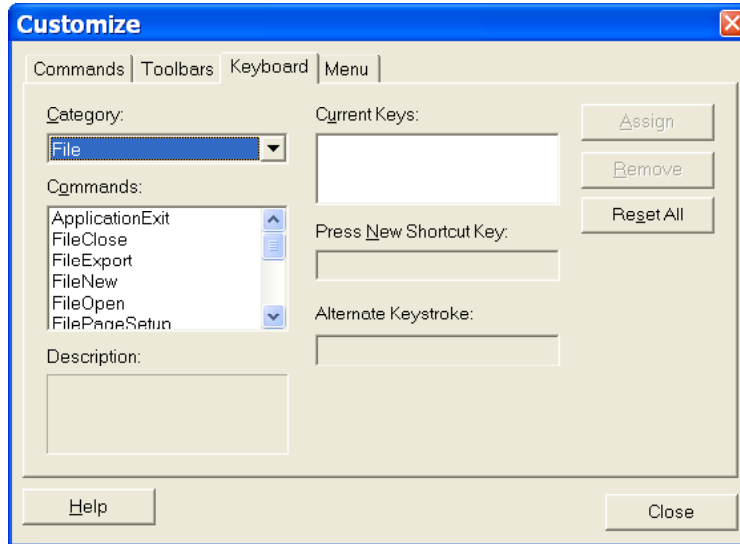


on a docked toolbar, or the title bar on a floating toolbar, to the new location.

If you drag the toolbar to the edge of the program window, it becomes a docked toolbar. When you move one docked toolbar, this might affect the location and size of other toolbars on the same row.

13 Customizing Keyboard

You can customize shortcut keys in μ Imp by assigning shortcut keys to commands that do not already have them or by removing shortcut keys you don't want. If you don't like the changes you make, you can return to the default shortcut key settings at any time.



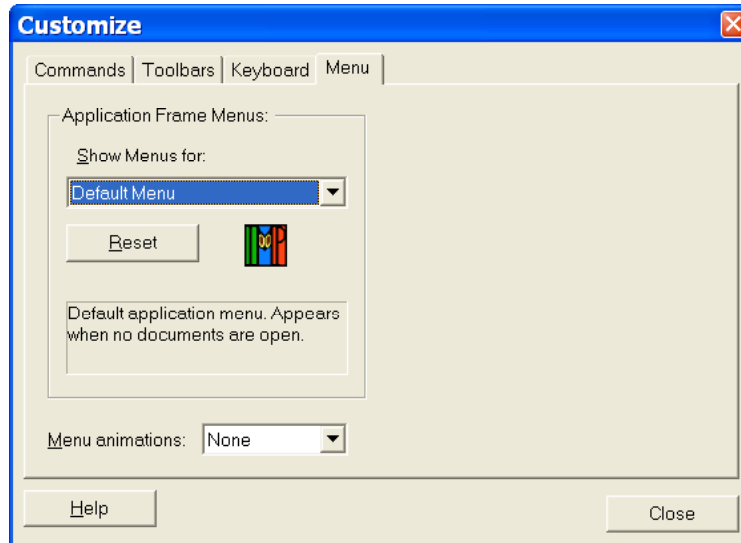
The control fields of this dialog are:

- [Categories]** Display categories of commands organized by menu name or type. Click a category to change the list of commands in the Commands box.
- [Commands]** Display the list of commands for the category selected in the Categories list box. For a description of a command, select the command and see the description of a commands in the Description field.
- [Current Keys]** Display the current shortcut assignments, if any, for the currently selected command.
- [Press New Shortcut Key]** Press the keys you want to assign to the selected command. If the key combination you press is already assigned to something else, the μ Imp lists the existing keyboard assignments below the [Press New Shortcut Key] box. To clear the [Press New Shortcut Key] field, press BACKSPACE.
- [Assign]** To assign the shortcut entered in the [Press New Shortcut Key] field, press the [Assign].
- [Remove]** To delete the shortcut selected in the [Current Keys] field, press the [Remove] button.

Notice that not all keyboard combinations can be assigned. For example, if you assigned a shortcut key for a program shortcut on the Windows Desktop, this shortcut key cannot be used in the μ Imp.

14 Customizing Menu

This panel allows to customize menus in the μ Imp.



The control fields of this dialog are:

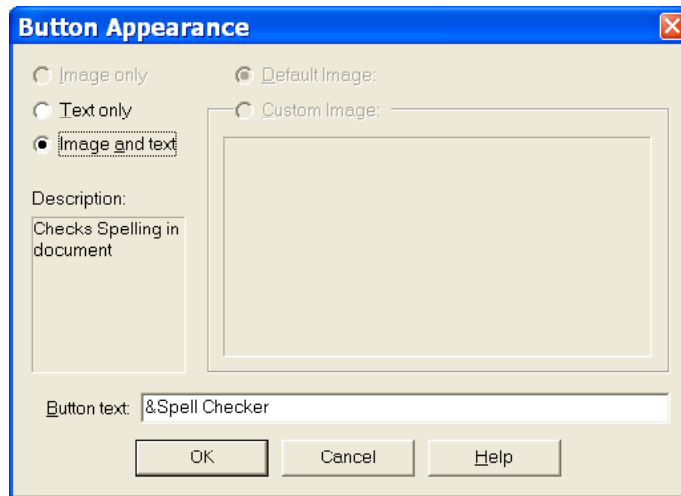
[**Show Menus**] Select the menu from the list.

[**Reset**] Remove any changes you made to the selected menu and restore the factory settings.

[**Menu Animations**] Animate menu. Select the desired menu animation from the list.

15 Customizing Button Appearance

This dialog box is brought up when you choose the [Button Appearance] item from the Customize pop-up menu.



To open the Customize pop-up menu, launch the Customize dialog box and then right-click on the button you want to change.

The [Button Appearance] allows to change the appearance of the selected button or menu command.

The control fields of this dialog are:

[Image Only], [Text Only], [Image and Text] Select the desired appearance of the button or menu command. The [Image Only] option is not available for menu command.

[Custom Image] Select the desired custom image of the button.

[Button Text] Edit the text associated with the button.

[OK] Remember the selected options.

[Cancel] Quit the dialog, forgetting the selected options.

[Help] Launch the help on the dialog.

16 Customizing Commands and Buttons

This section describes additional features for customizing the μ Imp.

Moving or Copying a Button

1. When moving or copying a menu command from one toolbar to another, make sure the toolbars you want to change are visible.
2. Launch the Customize dialog box.
3. Click the menu that contains the command you want to move or copy.

4. Do one of the following:
 - To move the command, drag it to rest over the menu you want to change. When the menu displays a list of commands, point to where you want the command to appear, and then release the mouse.
 - To copy the command, hold down CTRL and drag the command to rest over the menu you want to change. When the menu displays a list of commands, point to where you want the command to appear, and then release the mouse.
5. On the Customize dialog box, press [Close].

Moving or Copying a Menu to a Toolbar

1. Make sure the toolbars you want to change are visible.
2. Launch the Customize dialog box.
3. Do one of the following:
 - To move a menu, drag it to the new location on the same toolbar or another toolbar.
 - To copy a menu, hold down CTRL and drag the menu to the new location.
4. On the Customize dialog box, press [Close].

Moving or Copying a Toolbar Button

1. Make sure the toolbars you want to change are visible.
2. Launch the Customize dialog box.
3. Do one of the following:
 - To move a toolbar button, hold down ALT and then drag the button to its new location.
 - To copy a toolbar button, hold down ALT+CTRL and then drag the button to its new location.
 - On the Customize dialog box, press [Close].

Restoring Factory Settings for a Menu

1. Launch the Customize dialog box.

2. Right-click the menu you want to restore, and then click [Reset] on the pop-up menu.
3. On the Customize dialog box, press [Close].

Restoring Factory Buttons on a Built-in Toolbar

1. Launch the Customize dialog box.
2. Right-click the toolbar you want to restore, and then click [Reset] on the pop-up menu.
3. On the Customize dialog box, press [Close].

You cannot reset a custom toolbar.

Deleting a Button

1. Make sure the toolbar you want to change is visible.
2. Launch the Customize dialog box.
3. Do one of the following:
 - (a) On the toolbar, right-click the button you want to delete.
 - (b) Choose [Delete] in the pop-up menu.

or

- (a) Drag the button you want to delete off the toolbar.
4. On the Customize dialog box, press [Close].

Deleting a Command from a Menu

1. Launch the Customize dialog box.
2. Click the menu that contains the command you want to delete.
3. Do one of the following:
 - (a) On the menu, right-click the command you want to delete.
 - (b) Choose [Delete] in the pop-up menu.

or

- (a) Drag the command you want to delete off the menu.
4. On the Customize dialog box, press [Close].

Grouping Related Buttons and Commands

You can add a separator bar before the first and after the last item in a group to distinguish the group from other buttons and menus on a toolbar.

1. Make sure the toolbar you want to change is visible.
2. Launch the Customize dialog box.
3. To add a separator bar, keep the Customize dialog box open, right-click the button you want on the toolbar, and then click [Begin a Group]. A separator bar is added to the left of the button on a horizontal toolbar, and above a button on a vertical docked toolbar.
4. On the Customize dialog box, press [Close].

17 Bugs & Input

MicroIMP is a very complex system that took years to develop (early proof-of-concept versions go back to mid-90's). It is a new system. Problems and *imperfections* should be anticipated, and this is why this beta has been made publicly available.

Your input would be extremely valuable in completing the MicroIMP project; we would like to hear from you about problems, missing features, and your *impression* of the program.

Observe that there are many – perhaps, infinitely many – missing features. We will be adding them, and it is very important for us to know which features are most wanted; what is lacking in MicroIMP and needs to be added to make your work more productive.

We would also appreciate suggestions and ideas on *improving* the user interface; and any other comments you may have.

As a reward to the users that provide helpful comments, we will provide such users with unrestricted version of MicroIMP.

18 Terms of Use

MicroPress provides the initial version of MicroIMP on the *as is* basis. No warranty is given as to the functionality of the program; and MicroPress makes no commitment as to correcting the problems that may be encountered, as to providing future versions, or as to supporting the users in any way.

MicroIMP is an experimental software; like with any experimental software the risk is entirely yours.

MicroIMP permits free non-commercial use of this version of the software (build 012).

19 Forum

MicroPress provides a MicroIMP discussion forum at <http://www.microimp.com/forums/>).

Please address all questions to the forum; we are unable to monitor discussions in the newsgroup.

20 Trademarks

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