MaxAuthor
Version 2.5

THE UNIVERSITY OF ARIZONA. TUCSON ARIZONA

Computer Aided Language Instruction Group

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Introduction

The University of Arizona Computer Aided Language Instruction Group (UACALI) has made freely available for non-commercial use its MS-Windows and Internet based multimedia CALL authoring system. MaxAuthor has been under development since 1990 and was used by authors nationwide to create the recently published *Critical Languages Series* CD/DVD-ROMs. Without any programming, MaxAuthor lets you create language instruction courseware for Chinese, Japanese, Korean, and 44 other languages. Completed courseware can utilize audio, video, footnotes, and graphics. Student activities include MaxBrowser, Listening Dictation, Pronunciation, Multiple Choice, Vocabulary Completion, and Audio Flashcards. Lessons can be delivered via Internet or MS-Windows. Improvements have been made to the software in conjunction with the National Association of Self Instructional Language Programs (NASILP) and the US Department of Education. Please also see our MaxAuthor tutorials at http://cali.arizona.edu/docs/wmaxa/tuttoc.htm and MaxAuthor Frequently Asked Questions.

System Requirements
MaxAuthor is a 16-bit program. It requires Windows 95/98/NT/2000/Me/XP/Vista(32bit), SVGA (or better), sound card, speaker, 9MB disk space, microphone recommended.

The author records separate audio for both sentences and words and has the option of recording audio in the training language only, but can also record translations or paraphrases in up to 4 other languages or dialects. The author can either manually define the word and sentence boundaries or let MaxAuthor choose the boundaries automatically.

MaxAuthor works just like a text editor with tools that add audio and exercise material; there is no programming or scripting necessary. The author selects one of the 5 authoring views: Word, Sentence, Multiple Choice, Footnote, or Cloze (Vocabulary Completion). The tools within MaxAuthor let you play, record, or edit recordings. When the Record All menu choice is selected, MaxAuthor sequentially records each word or sentence. When a lesson text is comprised of multiple occurrences of the same word, you have the option of using the same recording for each occurrence to avoid re-recording the same word.

Once you record audio for your lesson, the student can immediately use MaxBrowser, Listening Dictation, Pronunciation, Vocabulary Completion, and Audio Flashcards without further customization. By adding more information to the lesson such as multiple choice questions, multimedia footnotes, and custom Vocabulary Completion blanks, you can enhance the richness of the student's interaction with the lesson. It's up to you, the instructor, to decide how much time you want to invest in your new lesson.

See this link for New features in version 2.5

The University of Arizona MAXFAMILY of MS-Windows and Internet applications teaches languages to students using theses formats:

Student Exercise	Description	Audio authoring required	Additional authoring required specific to exercise

MaxBrowser	Browsing format that allows a student to play audio attached to text, view footnotes, record themselves	Recommended	NO
MULTI	Multiple choice exercise	NO	YES
FLASH!	Context-based audio flashcard activity	YES	NO
PAX	Pronunciation exercise	YES	NO
DICTATION	Listening dictation exercise	YES	Recommended
CLOZE	Non-audio Cloze test that allows for multiple choice or direct type-in	NO	By default CLOZE blanks every 5th word

All MAX lesson files are automatically given the file extension '.max'.

MaxAuthor treats lesson text as a collection of sentences, words, footnotes, multiple choices, and cloze blanks. The instructor records separate audio for both sentences and words to allow the student to hear the contextual differences between words spoken in isolation, and words spoken in sentential context. MaxAuthor differs from other multimedia authoring packages in that it is specifically built for teaching languages: there is no scripting language; you graphically attach exercise elements to specific parts of the text and there are no programming languages to learn.

47 Written languages supported

Albanian	Cantonese Romanization	Catalan
Chinese (with optional Pinyin)	Croatian	Czech
Danish	Dutch	English
Finnish	French	Gaelic (romanized)
German	Hungarian	Hupa
Indonesian	Italian	Japanese
Kazakh	Kongo	Korean
Kurripako	Latin	Luiseno
Lummi	Mojave	Nahuatl
Navajo	Norwegian	Ojibwe (Chippewa)
O'odham	Pinyin Romanization (Mandarin)	Polish
Portuguese	Romanian	Russian
Siswati	Slovak	Slovenian
Southern Paiute	Spanish	Swahili
Swedish	Tagalog	Turkish
Xhosa	Yaqui	

Starting MaxAuthor

After installing, to start **MaxAuthor**, click on the desktop icon or **Start...Programs...UofA Language Courseware...Authoring Utility**. To create a new MAX file, use the **File...New** main menu choice.

User Interface

MaxAuthor is analogous to a word processor in the sense that when changes are made to a lesson, they can be saved to disk or can be abandoned at the user's discretion. It is advisable to save your work often, just as you would with a word processor. Audio changes cannot be undone, however.

Navigating Through the Document

You can use the mouse or keyboard to move to any point in the document. You can use the arrow keys to move the cursor, and by holding the control key down while using the arrow keys, you can move the cursor ahead or back one word. The **End** key moves the cursor to the end of the current line, and the **Home** key moves to the beginning of the current line.

Entering Text

Word wrapping will occur automatically. For Chinese, Japanese, and Korean (CJK) languages, a special input system translates your keystrokes into characters. For Chinese, the character conversion window expects you to type **Pinyin** syllables with optional tones, which will be converted to **Hanzi** characters. You can press the **Right Alt** key to switch from the input box to the document and back. Press F1 for input system help.

Using Keyboard Mapping

 For non-CJK languages that use non-English characters, you can click on this toolbar button (or when you select **Help…Keyboard Mapping** from the main menu), and you will see a pop-up mapping table such as the one below for Portuguese:

Keyboard mapping for por'

FontName: times new roman
KeyboardMapName: POR.key

À = `A	Ã = ~A	Ô = ^O	Ó = Alt+` O
à = `a	ã = ~a	ô = ^o	ó = Alt+` o
Ò = `O	Õ = ~O	Û = ^U	Ú = Alt+` U
ò = `o	õ = ~o	û = ^u	ú = Alt+` u
Ù = `U	Ü = ~U	Ç = ^C	Ç = Alt+` C
ù = `u	ü = ~u	ç = ^c	ç = Alt+` c
Ç = `C	Ç = ~C	Á = Alt+` A	
ç = `c	ç = ~c	á = Alt+` a	
° = `&	Ä = ^A	É = Alt+` E	
ª = `{	â = ^a	é = Alt+` e	
º = `}	Ê = ^E	Í = Alt+` I	
€ = `$	ê = ^e	í = Alt+` i	

Select Portuguese diacritics with prefix keys `, ~, ^ and Alt+` (acute)

[OK]

The first entry in the mapping table says "to get a capital A with an accent grave, press the prefix key "**'** " (the key below the tilde on US keyboards) and then **A**". Note that the cursor changes shape after you press the prefix key to let you know a mapping is about to happen. Note that this mapping is completely independent of MS-Windows keyboard mapping. You can press **Ctrl** + **Insert** keys to toggle between the keyboard mapping defined for the language and the unmapped keyboard.

Selecting Text

Once text is selected, it can be deleted, copied, or pasted over. Selected text will appear inverted relative to unselected text. You can double click on text to select a word, or hold the mouse button down to select larger portions of text. You can also hold down the shift key while using the cursor keys to select text. You can press **Ctrl + A** to **Select All** text in the lesson.

Getting Help

You can press F1 at almost any point to enter the help system. The input systems have extensive help on how to enter text in their respective languages.

Also, MaxAuthor has a special help button in the toolbar for giving help on almost any object on the screen. After you click on this button, the cursor changes shape to this arrow-question mark, and you can click on any button or menu choice to see what it does.

Toolbar

The toolbar (below the Main Menu) provides a quick access to common operations. For example, when you click on the toolbar button labeled **W**, it performs the same operation as the menu choice **View...Word Segments**. The help system will tell you what toolbar buttons perform specific operations.
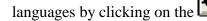
The Text Cursor

The blinking vertical cursor (or caret) functions as it does in a regular word processor. You can move the caret to any place in the text by using the mouse or cursor keys and add or delete single characters, even when the text is linked to exercise information. For CJK languages, you can change the *focus* from the input system to MaxAuthor and back by using the **Right Alt** key. For non-CJK languages, you can turn the keyboard mapping on/off by pressing the **Ctrl** + **Insert** keys.

Exercise Segments

Exercise Segments (or **segments** for short) delineate the boundaries of individual words and sentences (audio segments), footnotes, multiple choices, or cloze blanks. Word and Sentence segment boundaries can be automatically determined by the system when creating a new lesson (for CJK languages, MaxAuthor uses carriage returns to properly segment words and sentences.) Alternately, the author can manually designate the locations of segments. Segments of the same type cannot be overlapping.

Segment Type	Color	Audio	Additional Info Attached
Word	Red	YES	
Sentence	Black	YES	Listening Dictation Order (or don't use)
Footnote	Green	NO	Footnote Text or hyperlink
Multiple Choice	Magenta	NO	Multiple Choices
Cloze Blank	Blue	NO	Cloze Choices (or direct type in)

In MaxAuthor, you can only view one type of segment at a time, and the segments are color coded to reflect their type. You can use the cursor keys to move from segment to segment. Segments can span multiple lines, and appear as open-ended boxes when either the segment's endpoint or begin point do not lie on the same line. Segments that have not been completely authored appear as dotted lines, and fully authored segments appear as solid lines. For audio segments, there can be recordings of multiple languages attached. The authored/non-authored visual distinction only applies to the currently selected audio language. You can switch the current audio language with the **Audio…Language** menu choice.   You can quickly toggle audio languages by clicking on the toolbar button.

Segment View Selection

At any given time either the **Word**, **Sentence**, **Footnote**, **Multiple Choice,** or **Cloze** segment view will be selected, denoted by a push-button in the toolbar. You can only see a specific type of segment when the appropriate segment type is selected: each type of segment is given a distinct color. You can 'toggle' between views by clicking on one that is not depressed.

The "Current Segment"

A solid black horizontal bar underneath the segment text designates the Current Segment. You can move the Current Segment by pressing the arrow keys. When you scroll to a different area of the lesson text, MaxAuthor tries to find a segment of the current type in your new viewing area. If you scroll to an area of the lesson text where there are not any segments of the current type, there is no Current Segment, and the operations mentioned below are disabled and they will be grayed out.

Operations on the current segment

Name	Keyboard Shortcut	Mouse	Operation to be performed	Toolbar button
Properties	Ctrl + Enter	Right Button	Edit the properties of the segment	
Delete	Ctrl + Del		Remove the segment and all of its associated information	
Play	Ctrl + P		Play the segment (word or sentence segments only)	
Edit Audio			Edit the audio of an audio segment	
New			Add a new segment (after selecting boundary)	
Boundaries	F5		Change the segment boundaries	

Creating a new segment

 To create a new segment, highlight some lesson text by:
1. Pressing the cursor keys while holding down the shift key, OR
2. Move the mouse while holding down the left mouse button, OR
3. To select one word only, you may double click on it.

Then click on the **Add** toolbar button, which will take you into the properties dialog for your new segment. The type of segment you create is determined by the current segment view (Word, Sentence, etc.).

Audio Segments

Note: Please respect the copyright laws governing pre-recorded audio. DO NOT borrow audio from pre-recorded media to use with your lessons unless permission has been granted from the copyright holder.

As noted above, **Word** and **Sentence** segments have audio attached to them when a MAX lesson is fully authored. When you select **Edit Audio** for the current segment, you will see this dialog box:

From which you can record, re-record, play and save the audio attached
to the segment for the current language. When you select **Record All**,
MaxAuthor will start at the current segment and present the above
dialog for each segment.

Instructor Tip: If the student clicks on text in the MaxBrowser and the instructor did not define a
segment for that particular text, nothing will happen. If the student clicks on a defined segment
but the instructor did not record audio for that segment, the segment will be highlighted for an
instant but no audio will be played.

Automatic Borrowing of Audio

Sometimes, you will run into a word segment whose text is identical to an already recorded word.
In this case, MaxAuthor will play the audio of the identical word, and present you with the
dialog:

If you pick **Borrow**, **MaxAuthor** will use the previous recording for the
current segment, and if you choose **Record New**, MaxAuthor will
present the usual **Audio Recorder** dialog shown previously. When you
pick **Borrow**, this saves you the trouble of having to re-record words
repeated in the text, and also saves disk space.

Audio Dictionary

If you want to use recordings from other lessons, just define a *Dictionary Max File*
(**Audio…Audio Dictionary**) before recording the new lesson. Make sure that the **Audio
Language Names** are exactly the same. MaxAuthor will look for identical words from the other
lessons after searching the current lesson. If a match is found and you elect to borrow the audio
from another lesson, MaxAuthor copies the audio from the other lesson to the lesson you are
recording. MaxAuthor recursively reads every lesson linked by the *Dictionary Max File* (this
may take a while if there are many lessons). The best *Dictionary Max File* is a 'table of contents'
type lesson because it links to the most lessons.

Re-recording a Segment

A special case occurs when you re-record a segment which shares audio with other segments. In
this case, MaxAuthor will ask you if the new recording should be used for all segments that are
borrowing the audio or if the re-recording should only apply to the specific segment. This does
not apply to recordings borrowed from other lessons.

Editing the Waveform

It is usually desirable to remove silence from the beginning and end of the audio
recordings to: 1) increase the responsiveness for students when they click on text to hear the
audio, and 2) Reduce the disk space needed for each recording. If you are using an MS-Windows
compatible audio card, MaxAuthor by default will start the Windows Accessory program **Sound
Recorder** using the audio attached to the current segment. Please see the documentation for
Sound Recorder for more information about how to cut out sections of audio. When you finish

editing your audio, you will return to MaxAuthor. See the menu choice **Audio...Preferences** if you want to change the default audio waveform editor.

<u>**Importing Audio**</u>

You can **Import Audio** in the **Word Properties** or **Sentence Properties Dialog**. The imported audio file is copied to the lesson directory and renamed according to the MAX convention. This is very handy when working from pre-recorded DAT or cassette source materials.

Delete Segment

When a segment (of any type) is deleted, the text itself remains. Any previously recorded audio (if any) for the segment will be deleted from the disk unless other segments are sharing the audio. You can delete multiple segments by highlighting a section of text and then choosing **Delete Segment.** You will be prompted for confirmation before segments are actually deleted.

Word Segments

Word segments are used in these MAXFAMILY exercises:

Exercise	Word segments required for exercise?	How word segments are used
MaxBrowser	Recommended	Student can hear individual word recordings by native speaker and up to 4 other languages
MULTI	Recommended	Student can hear individual word recordings.
FLASH!	YES	Flash card deck is automatically built from all unique words in a lesson. Student can also browse through example of word in context, listening to attached audio.
PAX	YES	Student practices listening and pronouncing individual words and sentences
DICTATION	Recommended	As an aid to comprehension, student can hear the component words of a dictation sentence
CLOZE	no	Not Used

This is what you see when you right click on a Word Segment. Right clicking is equivalent to moving the audio cursor to the segment and selecting **Segment…Properties**

Sentence Segments

Exercise	Sentence segments required for exercise?	How sentence segments are used
MaxBrowser	Recommended	Student can hear individual sentence recordings by native speaker and up to 4 other languages.
MULTI	Recommended	Student can browse through lesson text and hear it spoken.
FLASH!	Recommended	Student can browse through examples of a flashcard word used in a sentence and hear it spoken.
PAX	YES	Student practices listening to and pronouncing individual words and sentences
DICTATION	YES	Student listens to a sentence and types in what was spoken.
CLOZE	No	Not Used

Sentence segments can be given a specific presentation order for the DICTATION exercise. In Sentence Segment View, MaxAuthor displays (in very small print) the sentence segments to be used in DICTATION, and their order of presentation. The numbers below the sentences indicate the order in which they will be presented in the dictation exercise, for example "D3". If a sentence is not to be used in DICTATION, it will not have any text underneath it. By default, newly created sentence segments will not be used in DICTATION until you select a presentation order for the sentence in the **Sentence Segment Property Dialog**.

It is usually advisable to include any trailing sentence punctuation (e.g. periods, question marks) within the sentence segment boundaries. If the **MAX** lesson is going to be used for a DICTATION exercise, including the punctuation forces the DICTATION student to include sentence punctuation as part of his/her answer.
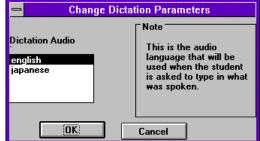
For Chinese, Japanese, and Korean lessons, we recommend that you mark any sentences that have Roman characters as being non-dictation sentences or DICTATION will include the Roman characters in the exercise.

We recommend that a sentence chosen for dictation should not exceed the width of the screen in size. If the sentence is too long, it will be presented using a scrolling window to the student.

Dictation Options

The main menu choice **View...Dictation Parameters** will show you this dialog box:

By default, the first audio language you assigned to your MAX lesson will be the primary language used for the DICTATION exercise. The second language you assigned will be designated the "translation" language. This is handy when a MAX lesson contains two dialects of a language, and the author wishes to use a different dialect in DICTATION. Another possibility is the creation of a translation exercise using DICTATION that plays audio to a student in one language, but expects student input in another language.

Footnote Segments

 Footnote segments are only used in MaxBrowser, not any of the exercises, and can be a text footnote or a link to another file such as a graphic, video, audio, or another MAX lesson.

Text Footnotes

Text footnotes' purpose is to give the student additional information about a word, phrase, idiomatic expression, or grammar issue. They are in the same written language as the lesson text. Text footnotes are shown to the student in a window below the lesson text in MaxBrowser. It is sometimes helpful to use the command **Window...Tile Horizontal** within MaxAuthor to see both the lesson text and the footnote window.

Link to other MAX lessons

This is how hypertext linking is done with MaxAuthor. For example, you can create a table of contents to all your other MAX lessons. We recommend that you use a relative path (e.g. ../../) rather than an absolute path (e.g. c:\temp\temp.max) so you can move your lessons easily on your disk or export your lessons to HTML or CD-ROM.

Link to video file

When you include this kind of link, a small TV icon will appear in MaxBrowser as a clickable hot spot. When the student clicks on this icon, they see the video appear in a separate window. The video must be AVI format and be smaller than 320x240. The topic of digital video production is beyond the scope of this manual.

Link to audio file

This is useful if you want to link to an arbitrary audio file such as a song. Audio must be in WAV format.

Link to a graphic file

Helpful when you want to show an illustration. The graphic must be in BMP or DIB format. You may wish to limit the size of the graphic to the smallest screen resolution that your end users will be using. Common sizes are 640x480, 800x600, etc. MaxBrowser does not attempt to scale the graphic. If the size of the graphic image is greater than the user's screen, MaxBrowser will present the user with scroll bars to navigate the image. You may also wish to limit the number of colors of the image to the smallest number of colors that your end users will be using. Our Critical Languages Series CD-ROMs, (published in 2000) uses 640 (or sometimes larger) by 480 with 256 colors. Be careful to make sure that you are legally entitled to use the image. If you are working on a large project, you should keep a database of where each image came from and who

the copyright owner is. You may also wish to keep the highest resolution image on file for the future.
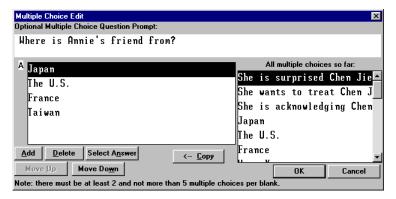
Link to a web page

When the student clicks on this footnote, the computer's default web browser is started and goes to the URL.

Link to a program that may execute a file

Directs MaxBrowser to launch another program with optional parameters.

Multiple Choice Segments

Multiple choice segments are only used in the student application MULTI. In this dialog you can add up to 5 multiple choice responses to the segment. The **Presentation Order** is the order in which the multiple choice question is presented to the student. The special mark **A** is shown next to the correct answer for the question, and you can choose any one of the responses to be the correct answer. Shown at the right side of the dialog is a list of all multiple choice responses for the entire lesson. By selecting the **Copy** choice, you can quickly copy *distracters* to the multiple choice question.
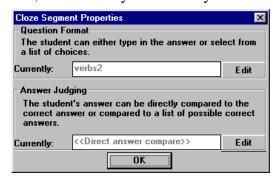
Cloze Segments

Cloze segments are only used in the student application CLOZE. CLOZE is a fill-in-the-blank exercise based on the concept of the "Cloze Test." The student's job is to type in the correct character(s) for each blank or, alternately, select the proper answer from a choice list. Once the student has completed the exercise, CLOZE checks each answer and scores the exercise for accuracy.

You can choose to automatically create Cloze blanks every Nth word, where N is selectable. To do this, switch to CLOZE view, highlight a section of the text and click on **Segment…Automatic Segmentation.** If you are not satisfied with the placement of individual Cloze segments, you can delete any of the automatically created segments and define new ones. Alternatively, you can choose to forego automatic placement, and manually define every Cloze segment. Each Cloze blank can either be a direct type-in (by default), or multiple selection.   The MaxAuthor CLOZE view shows the name of the multiple selection cloze list (if any) attached to each segment in small text.

This is what you see when you right click on a Cloze Segment. Cloze segments have two major properties, the **Question Format** and **Answer Judging.**
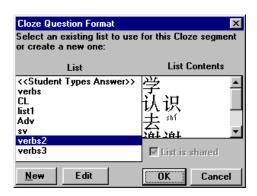
Question Format

The Question Format is either **<<student types in answer>>** (the default) or the name of a choice list that the student will pick from. Choice lists can be shared between Cloze segments which can save a lot of typing and provide a consistent list of choices and distracters for the student. In the example shown here, **verbs2** is the name of a choice list and it has been selected as the Question Format for the current Cloze segment. This list could be used by the author for several Cloze segments in this lesson that are blanking out verbs. For beginning level language lessons, you should generally try to use a choice list rather than **<<student types in answer>>**, because students may be unfamiliar with typing in the target language.

When you select **Edit** from the above **Cloze Segment Properties** dialog, you see the **Cloze Question Format** dialog:

From this dialog you can select the choice list (or **<<Student Types Answer>>**) that will be presented to the student when the blank is selected. The **List Contents** window on the right shows the choices comprising the list highlighted in the left **List** window.
You can see that the list **verbs2** contains several choices.

Cloze List Editing

When you select **Edit** from the above **Cloze Question Format** dialog, you can edit the selected list, in this case **verbs2**.
The buttons on the bottom allow you to change the presentation order or add a new choice to the list.
When you select **Add**, a small text-editing box will appear to allow you to type a new choice in the target language. For CJK languages, a special input system translates your keystrokes into characters. For Chinese, the character conversion window expects you to type **Pinyin** syllables with optional tones which will then be converted to **Hanzi** characters
The window on the right side of the dialog shows all cloze choices in the entire lesson. When you highlight a choice, you can select **Copy** to quickly add that choice to the Cloze list on the left.

Answer Judging

Answer Judging is the second major property of a Cloze segment and it specifies either **<<direct answer compare>>** (the default) or the name of a choice list specifying multiple correct answers for the segment.

<<direct answer compare>> means the student's answer will be directly compared to the text encompassed by the segment, and this is what most authors use. Cloze segments can share answer specifications in a similar fashion to sharing choices for blanks.
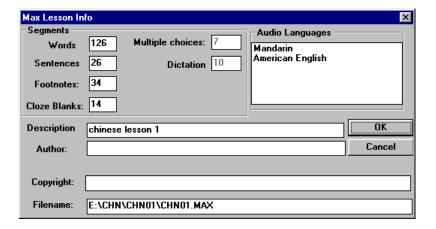
<u>Answer Judging List Editing</u>

This process is very similar to **Cloze List Editing** above, except there is a separate pool of choice lists for answer specifications.
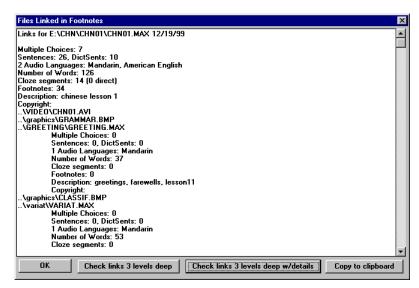
Additional Authoring Tools

View...Lesson Information

This main menu choice shows you important information about your lesson:

View...Footnote Links

This command checks all of the links in the lesson to make sure they are valid. When dealing with a large body of MAX courseware containing many levels of hyperlinks, it is extremely helpful to test if all of the links exist. This command also shows you the lesson information of any other lessons the lesson may be linked to. Shown here is 3 level deep list of the footnote links from lesson 1 of Beginning Chinese. Note that lesson 1 contains links to a video

(..\video\chn01.avi), links to graphics (..\graphics\grammar.bmp, etc.), and links to another MAX lesson (..\greeting\greeting.max). Because we are looking at three levels deep, greeting.max is

further expanded to show its links and if it were to have a link to another MAX lesson, that lesson would have been expanded as well.

Creating a New MAX Lesson

In this section, we will show you how to create a new MAX lesson. Please also see our tutorials at http://cali.arizona.edu/docs/wmaxa/tuttoc.htm.

Step 1

Select **File...New** from the main menu.

Optionally Importing a text file
Instead of directly typing the text for the lesson from within MaxAuthor, you can import a text file for the new lesson (or use our text editor EZR to create the file) and name the file using the three-letter extension corresponding to the language of the text. To import text from another application such as a web browser, copy the text to the Windows Clipboard, save to a file, then import that file into MaxAuthor. For Chinese, MaxAuthor expects GB2312 format and for Japanese EUC f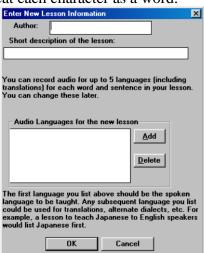ormat. Note that because there is no phonetic or end of compound information stored in these file formats, Pinyin display (in Chinese) will not be effective and **Automatic Segmentation** in Word View will simply treat each character as a word.

Step 2

You can choose up to 5 audio languages to be in the **MAX** lesson. The first language listed is assumed by MaxBrowser to be the native language that the text was written in, and is the default audio language as well.
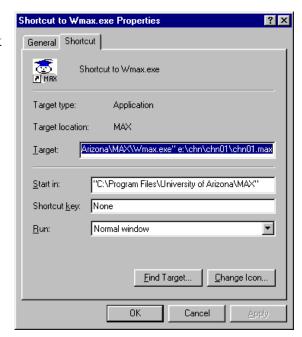
Step 3

After you have either typed in the lesson text or have imported a text file you can now do automatic word and sentence segmentation. Although the automatic segmentation algorithm does a pretty good job, it may be slightly confused by some non-standard texts such as dialogs. If you find that an incorrect segment has been produced, you can always delete it and add a different one later. To automatically segment, highlight some text and choose **Segment...Automatic Segmentation**. For the CJK languages, segmentation boundaries are tied to the carriage returns created during text input.

Step 4

The easiest way to make your lesson available to students is to place a shortcut on the desktop. Click on **Start...Programs...Windows Explorer** and navigate to the directory where you installed MaxAuthor (**c:\Program Files\University of Arizona\Max** by default). Right click on **wmax.exe** and select **Shortcut** from the drop down menu. Drag the shortcut to the desktop, and right click on it to get the properties dialog. At the end of the Target field, type in the path of your lesson. You will probably also want to change the name of the shortcut to something more descriptive. Then, when students double click on the desktop icon, they will start your lesson.

Shortcut to Wmax.exe Properties

| General | Shortcut |

Shortcut to Wmax.exe
MAX

Target type: Application

Target location: MAX

Target: Arizona\MAX\Wmax.exe" e:\chn\chn01\chn01.max

Start in: "C:\Program Files\University of Arizona\MAX"

Shortcut key: None

Run: Normal window

[Find Target...] [Change Icon...]

[OK]   [Cancel]   [Apply]

We recommend having a directory structure for your lessons that might look like this:

/MAXNET	*Base directory for all your lessons*
/TUR	*Turkish language directory*
/Lesson1	*Directory for Turkish Lesson1*
lesson1.max max00000.wav,max00001.wav,etc.	*MAX lesson file and the lesson's audio files*
/Lesson2	*Directory for Turkish Lesson2*
lesson2.max max00000.wav,max00001.wav,etc.	
etc.	
/SPN	*Spanish language directory*
/Lesson1	*Directory for Spanish Lesson1*
etc.	

Editing the Text of a MAX File

Once MaxAuthor creates a MAX file, you can still directly edit the lesson text, much like our text editor, EZR . If you try to delete a character that is the last remaining character of any type of segment, you will be warned that a segment will be deleted as well. This gives you an opportunity to abort your action because if a segment is deleted, all information attached to the segment (audio, multiple choices, etc.) is deleted as well.

You can **Cut**, **Copy**, and **Paste** text between lessons that use the same written language and to text footnotes. Only text can be pasted, not any segments that may be attached to the text. If you try to **Delete** or **Cut** text that has segments attached to it, the segments will be deleted after you have been given a warning. When you **Copy** text in MaxAuthor for non-CJK languages, this text is placed on the Windows Clipboard so it can be **Pasted** into other applications such as MS-Word if you set the font for the text to be the same as what was used inside MaxAuthor (shown in the keyboard mapping for the language).

How to import text from a Word Document into MaxAuthor

We are going to vastly improve the **Paste** facility in the next version of MaxAuthor.
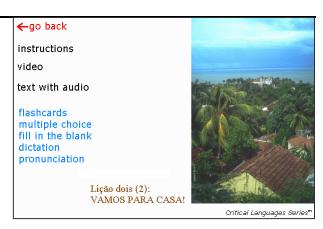In the meantime, here are the steps you can take to create a MAX lesson from a Word Document:
1. In Microsoft Word, do a **File...Save As**, and pick 'text only w/line breaks' as the type of file to save, and save it into any filename (maximum 8 characters long with a three letter extension e.g. "temp.txt").
2. You can then import this file into MaxAuthor when you create a new max lesson.
3. In the **Create New Max Project** dialog, in the **Import File** section, click on the **Browse** button, and in the type of file to look for, click on **"All files"** and select the file.

How to import text from a Web Page into MaxAuthor

1. From a web browser, highlight a small section of text and do **Edit...Copy**
2. Open up Notepad and paste; then save the file into any filename (maximum 8 characters long with a three letter extension e.g. "temp.txt")
3. Open MaxAuthor, do **file...new**; in the 'create new max project' dialog box, click on the 'browse' button, 'list files of type' **All Files**, and select the file in step 2.

Creating Graphic MAX Title Pages

The MAX Title Page is an optional feature in MaxBrowser that helps you create a more graphical interface between the student and the courseware. You provide a BMP graphic image and a file that contains the location of "hotspots" on the image and what action should be taken if the user clicks on each hotspot. Max Title Pages are useful for tables of contents, welcome pages, and lesson title pages. The example shown here is the MAX Title Page from Lesson 2, Beginning Brazilian Portuguese.
This is a 600x400 graphic file created with Adobe Photoshop, and the included photograph is from Library I of the Corel Stock Photo Library.

The file that contains the hotspot locations is given the same name as the MAX file except it has a **.mti** (MAX Title) extension. Lesson 2's filename is **por02.max,** so the MTI filename is **por02.mti**. MaxAuthor does not yet have any facilities to edit MTI files, but you can use **Windows notepad** to edit them. There can be up to 40 hotspot "objects" per file and they need
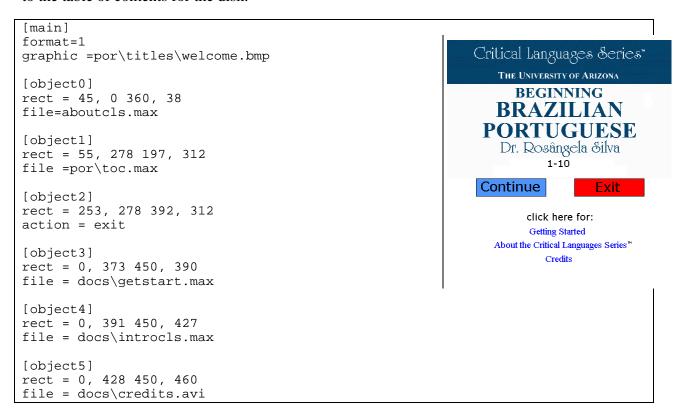
to be consecutively named **object0**, **object1**, etc. Each object can have an action and/or a file. The legal actions (capitalization is not important) are:

Continue	Continues to the MaxBrowser regular text with interface for the lesson
Back	Goes back to the previous lesson
Exit	Exit MaxBrowser
wflash	Run the MAX Flashcard student format on the current lesson
Wpax	Run the Pronunciation exercise
Multi	Run the Multiple Choice
wcloze	Run the Cloze
Ezr	Run our text editor, EZR
wdict	Run the Listening Dictation

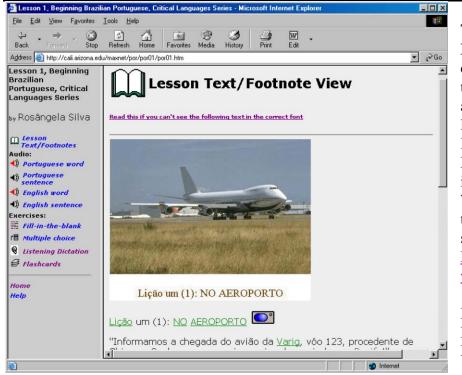Here is a listing of **por02.mti** with comments in *italics:*

```
[main]                              This tag is required.
format=1                            Must be 1
graphic =..\titles\por02.bmp        The relative location of the graphic file

[object0]
rect = 0, 0 180, 40                 The hotspot format is xstart,ystart xend,yend
action=back

[object1]
rect = 0, 41 180, 80
file = ..\titles\instr.txt          This text file is shown in a dialog box

[object2]
rect = 0, 81 180, 120
file = ..\video\por02d1.avi             This video file is shown in a dialog box

[object3]
rect = 0, 121 180, 160
action=continue

[object4]
rect = 0, 161 180, 200
action=wflash

[object5]
rect = 0, 201 180, 225
action=multi

[object6]
rect = 0, 226 180, 250
action=wcloze

[object7]
rect = 0, 251 180, 275
action=wdict

[object8]
rect = 0, 276 180, 300
action=wpax
```

Here is the welcome page for the lessons 1-10 Beginning Brazilian Portuguese CDROM and a listing of **welcome.mti**. Notice the **file** link in object0 is another max file and Object1 is pointing to the table of contents for the disk.

```
[main]
format=1
graphic =por\titles\welcome.bmp

[object0]
rect = 45, 0 360, 38
file=aboutcls.max

[object1]
rect = 55, 278 197, 312
file =por\toc.max

[object2]
rect = 253, 278 392, 312
action = exit

[object3]
rect = 0, 373 450, 390
file = docs\getstart.max

[object4]
rect = 0, 391 450, 427
file = docs\introcls.max

[object5]
rect = 0, 428 450, 460
file = docs\credits.avi
```


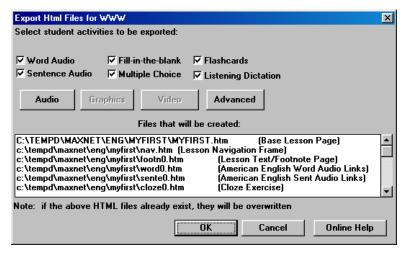## Creating Interactive World Wide Web Language Lessons

The menu choice **File...Export Html** will create a collection of files that will allow many aspects of your MAX lesson to be used on the Internet by students. MaxAuthor can generate interactive World Wide Web exercises for all of the 47 languages we support. Please see the Export your lesson to the web tutorial.

MaxAuthor can export HTML (Hypertext Markup Language) files

that allows students to do almost all the activities they could do in the Windows version:

- View the lesson text and footnotes with video.
- Listen to word and sentence audio for all languages in the MAX lesson.
- Do an interactive CLOZE lesson that functions similarly to the way the MS-Windows version does.
- Do an interactive MULTI (multiple choice) lesson.
- Context sensitive Flash Cards with audio.
- Listening Dictation.

The level of interactivity available on the WWW is not yet quite as good as with our MS-Windows student formats, but there are a number of benefits including: 1) distribution of lesson materials and correction of typographic errors can be done at a central location, 2) other materials on the web such as maps and graphic images can be easily integrated with our MAX lessons via "hyperlinks" to other files. On the other hand, the major browsers are not consistent in how they handle many language's text display and input on different computing platforms. For that reason, we now only support the Microsoft Internet Explorer browser.

Typically, the instructor has provided footnotes, audio, graphics, and exercises (such as multiple choice and fill-in-the-blank) for the lesson. On the left hand side of the lesson page, the student can select which 'view' of the lesson to examine.

To create an HTML version of your MAX lesson, select the **File...Export HTML** main menu choice and you will see the dialog box shown here. When you click OK, MaxAuthor generates the HTML files and asks you if you would like to view the files in your browser. If you say YES, MaxAuthor starts up your default browser and instructs it to view the files you just created. Note that you may have to switch windows from MaxAuthor to the browser window.

All of the HTML files are created in the same directory as your lesson file and have the extension **.htm**. The *Base Lesson Page* HTML file uses frames and contains links to the other files.
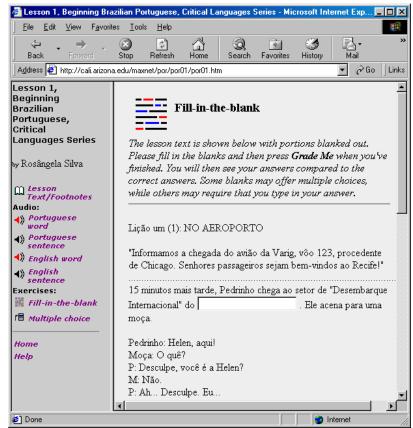
EXPORT HTML DIALOG BOX CHOICES:

Word + Sentence Audio

If these are checked and if you have recorded word or sentence segments, the student will be able to listen to your audio.

Create Interactive Cloze

If you have provided Cloze segments in the lesson, this box will be enabled in the **Export HTML** dialog box.

If you check the box, MaxAuthor will generate a Cloze exercise in addition to the other lesson information, and will place a link to the exercise in the navigation frame. Note that since some blanks may require the student to type the answer into a blank rather than select from a list of choices, there are a number of input issues for several languages. We recommend that you avoid direct type-in blanks (by providing a list of choices) to minimize the installation requirements for students.

When the student clicks on **Help** in the navigation frame, extensive help is available for students to configure their computers.
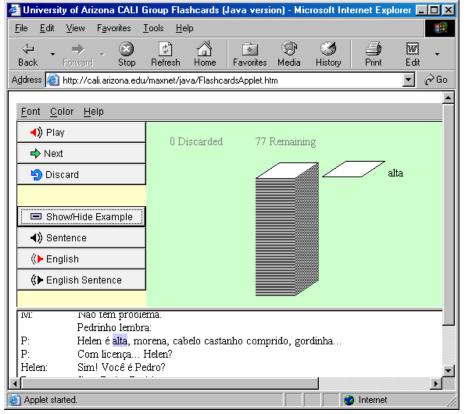
Create Multiple Choice

If you have provided Multiple Choice segments in the lesson, this box will be enabled in the **Export HTML** dialog box. If you check this box, MaxAuthor will generate a Multiple Choice exercise.

Create Flashcards

If you have word segments defined, this choice will be enabled in the **Export HTML** dialog box. If you check this box, MaxAuthor will generate a Flashcard exercise for your lesson.

The JAVA version of the Flashcards works very much like the Windows version. For more information about how the flashcards work, click on the **Help** button, which takes you to: http://cali.arizona.edu/maxnet/java/help.htm.

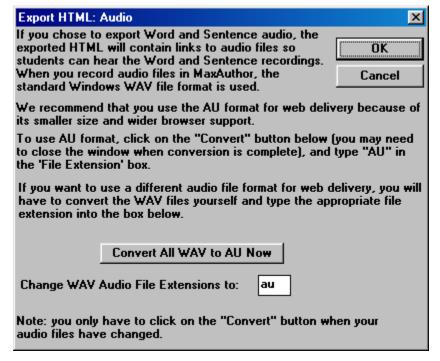Note that to properly test the flashcards, you need to provide a URL (e.g. http://myschool.edu/mylesson/mylesson.htm) in the address of the browser rather than the *filename* (e.g. c:\mylesson\mylesson.htm), which is what MaxAuthor will use by default. This is because of a limitation (feature) of JAVA beyond our control. Ask your system administrator what URL you should use for your lessons so your students can access them.

Create Listening Dictation

If you have sentence segments defined and have recorded audio for them, you can check this box in the **Export HTML** dialog box to create a listening dictation. The student can click on each sentence, listen to it, and type in what was spoken. When the student clicks on **Grade Me**, the student's answer is compared to the real answer and a score is shown. Note that the Web version of the Listening Dictation exercise is not yet as sophisticated as the Windows version.
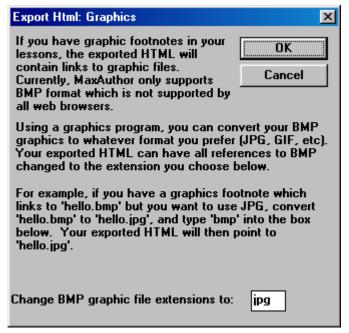
The Audio Settings

If your lesson contains word or sentence audio, the **Audio** button in the **Export HTML** dialog box will be enabled and it brings up the **Export HTML: Audio** dialog box.

The WAV audio file format used by MaxAuthor under MS-Windows is uncompressed. You can have MaxAuthor change any audio links from WAV files to another extension, such as AU. AU is recommended because it is one of the most universal audio file formats on the web and is about 50%

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smaller than a WAV file. The button **Convert All WAV to AU Now** will convert all of your WAV files to the AU format. You only need to run this after you have made any changes to the audio. When you click on **Convert All WAV to AU Now,** a small window will appear showing the progress of the conversion. Wait for the conversion to finish and then click on the **Window Close** button to dismiss the window. You could also run your own conversion program to convert all of your WAV files to some other format, such as RealAudio format.
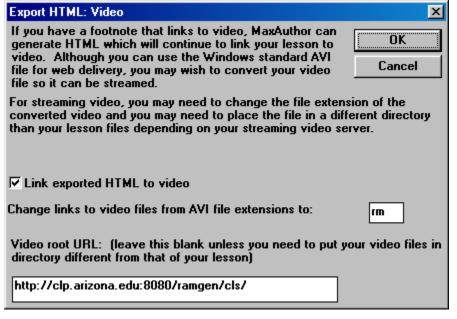
The Graphics Settings

If your lesson contains footnote links to graphics, the **Graphics** button in the **Export HTML** dialog box will be enabled. Clicking on this gives you the **Export Html: Graphics** dialog.

The graphics file format that MaxAuthor uses for graphical footnotes under MS-Windows is BMP, which is uncompressed. MaxAuthor can replace any graphical footnote references to BMP files to the file extension of your choosing (GIF, JPG, etc). You need to use another program such as MS-PAINT to convert the BMP files to the file type you prefer for web delivery.
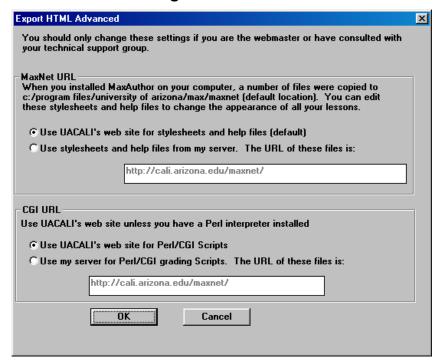
The Video Settings

If your lesson contains footnote links to video, the **Video** button in the **Export HTML** dialog box will be enabled. Clicking on this gives you the **Export HTML: Video** dialog box.

The AVI video file format used by MaxAuthor under MS-Windows may not be the best choice for web delivery. You can have MaxAuthor change any

footnote video links from AVI to another extension, such as **RM** (RealVideo). You need to use another program such as RealProducer to convert the AVI file to the file type you prefer.

Because of the nature of streaming file servers, the video file may need to be located in a different directory than the MAX lesson. The **Video root URL** is an optional prefix that MaxAuthor will prepend to links to your video files. In the above Portuguese example, the AVI video file was por01da.avi. Because we selected ***http://clp.arizona.edu:8080/ramgen/cls/*** as our **Video root URL** and **rm** as our AVI file extension, MaxAuthor will link to the file: http://clp.arizona.edu:8080/ramgen/cls/por01da.rm when the student clicks on the video icon, and start up a RealPlayer.

The Advanced Settings

MaxNet relies on two directories to make it work: 1) the **MaxNet URL** is the source of graphics, help files, style sheets, etc. and 2) the **MaxNet CGI URL** is the directory which provides the scripts so fill-in-the-blank and multiple choice exercises can be graded. By default, you can use our server for these two directories. This was not the case with MaxAuthor prior to version 2.0.

Optionally setting up a local MaxNet directory

There are three reasons why you might want to set up a local MaxNet directory: 1) to customize your lessons by editing icons or language specific style sheets, 2) to make your lessons not rely on our server, or 3) to create lessons for languages that use embedded fonts.

To set up a local MaxNet directory, copy all the files from your MaxNet installation (by default c:\Program Files\University of Arizona\Max\maxnet) directory to your web server. Then change the **MaxNet URL** in the **Export Html Advanced** dialog box so that it points to the directory where you copied the MaxNet files. If you want your lessons to be completely independent of our web site, make sure that you have a Perl/CGI system on your server and change the **MaxNet CGI URL** to the URL where you copied the MaxNet files. Then make sure the CGI files are given the proper execution privileges.

Other Export HTML Features and Tips

- If you want to include a JPG graphic image in your main HTML page as in http://cali.arizona.edu/maxnet/swa/swa2/swa2.htm, put the graphic in the same directory as the MAX file and give it the same name. For example, if your max file is por01.max, put a file called por01.jpg in the same directory and this image will be placed at the top of the lesson text/footnote view.
- HTML filenames and links generated by MaxAuthor are *always meant to be lower case.* Unfortunately on different versions of Windows, some filenames may be upper case. Windows 95/98/ME are not case sensitive but Windows NT/2000/XP/Vista are. If your web server's filenames are case sensitive and you use an FTP program to transfer files, make sure that **Force Lowercase Remote Names** is selected. If your FTP program doesn't have this feature, we recommend using a free utility called ChangeCase to change the filenames to all lowercase before you transfer the files.
- You can't put your own HTML directly into the MAX lesson text.
- Some students using your lessons on the Internet may experience problems playing audio files, see http://cali.arizona.edu/maxnet/maxaudio.htm

Style Sheets

A separate Cascading Style Sheet is used for each written language, located in the MaxNet directory. After you set up a local MaxNet directory on your server, you can customize the font or other text formatting features for all your lessons by editing these files. For example, styleger.css is used for German, styleita.css for Italian, etc. Also stylword.css, stylsent.css, and stylfoot.css can be modified to change the look of lessons created by MaxAuthor. nav.css controls the look of the navigation frame. Do a **view…source** from within Internet Explorer when viewing one of our lessons to see how the style sheets are used.

Using lessons on WebCT and Blackboard

Max lessons using audio and video can be used with WebCT and Blackboard. The score based activities (multiple choice, fill-in-the-blank, listening dictation) do not yet connect with the student tracking database.
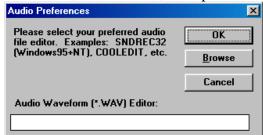For WebCT 3.8 Campus Edition to upload a MAX lesson (let's call it por01.max):
1. ZIP up all the files in your MAX lesson directory por01, including audio, call it por01.zip
2. Go to the **Manage Files** screen in WebCT, and select **Create a new folder:** por01
3. Select **Upload a file**, and browse to pick your ZIP file por01.zip
4. Select the destination to be the folder created above, por01
5. Once the file has uploaded, click on it and select **UnZip,** and select the new folder por01 as the destination.
6. Edit introduction.html or one of your other lesson files to link to por01/por01.htm.

For Blackboard , see http://cali.arizona.edu/docs/wmaxa/blackboard/. As noted above, make sure that all of the files that you transfer are in lowercase; we recommend a free utility called ChangeCase.

Other MaxAuthor Menu Choices

File...Export Text

You can export the entire contents of a MAX lesson to a text file suitable for editing with EZR, our multilingual text editor. The exported file will contain all lesson information including: lesson text, cloze blanks, multiple choices, footnotes, and copyright information.

Audio...Preferences

Allows you to use a different audio waveform editor rather than the default **Sound Recorder** for WAV files. Your selected waveform editor should be capable of accepting a file name on the command line (most do).

Testing Your Max Lesson

You can run the student versions of MaxBrowser, DICTATION, PAX, MULTI, FLASH!, or CLOZE on your current lesson from within MaxAuthor by using the **Test** main menu choice. MaxAuthor will make sure you have saved your lesson (if any changes have been made) before testing.

Checking Audio File Integrity

The Main Menu choice **Audio…Check Audio File Integrity** will check to make sure that audio has been recorded for every audio segment in each audio language you have defined. It also checks to make sure that each of these audio files exists on the disk. If one file is not found, you will be shown the incomplete audio segment. We recommend you use this feature before testing your new lesson, and always use it before making the lesson available to students.

Technical Information

Audio

Audio files can consume a significant amount of disk space. Before you enter a MaxAuthor session, it is advisable to first verify that enough space is available. Borrowing audio between word segments as much as is feasible can save disk space. Borrowing allows segments to share references to the same audio file, instead of increasing the number of audio files.

Transferring a MAX lesson

MaxAuthor creates a separate directory for each MAX lesson, thus isolating all of the audio and text files associated with a given lesson. Transferring a lesson is then easily accomplished by copying all of the files in the lesson's directory to another area -- without risk of affecting other lessons, assuming that the lesson is not hyperlinked (in a footnote) by another lesson.

Recovering your work

Whenever you save a MAX file to disk, MaxAuthor copies your old MAX file to the file *MAXFILE.BAK* in the same directory.

Known Issues and Limitations

Arabic

Although previous versions of MaxAuthor could create Arabic MAX lessons, we no longer support Arabic.

Graphic Max Title Pages (MTI Files)

Cannot yet be translated to HTML and are not yet searched by **View…Footnote Links**

Screen Resolution

We have seen problems with MaxAuthor when used on some Dell laptops with greater than 1280x1024 resolution.

Acknowledgements