What is xlCBT?

The xlCBT is an add-on for Microsoft Excel 95 and 97™ that helps you prepare CBT (Computer-Based Training) materials based on Excel. With xlCBT, you can easily organize CBT materials and show them to your readers.

The xlCBT consists of two components: xlCBT Authoring Tool and xlCBT Runtime.

xlCBT Authoring Tool

- The **xlCBT Authoring Tool** is for preparing computer-based training (CBT) materials. By using xlCBT Authoring Tool, you can easily prepare interactive programmed Microsoft Excel ™ workbooks that display dynamic data on worksheet, text boxes, drawings, graphics, and buttons in a sequence you predefined.

xlCBT Runtime

- The **xlCBT Runtime** is used for your readers (kids, students, and clients) to display and read the materials prepared by xlCBT Authoring Tool. A reader can navigate among these materials by clicking next, previous, hint, show me, and contents button in navigation toolbar. The xlCBT Runtime is generated by xlCBT Authoring Tool and kept in the same file.

- The xlCBT Runtime can be run on Microsoft Excel ™ 5.0, 95, or 97.

The xlCBT is suitable for those who prepare Excel-based instruction materials and self-learning materials, such as teachers, trainers. It is also suitable for those who present Excel-based data to their clients, such as businesspersons, scientists, and officers.

It is also suitable for use on the Internet because there is only one file needed by readers. However, the client machine should have Microsoft Excel ™ installed.

There is a demo file named "xlCBTDemo.xls" in this package. You can open it to see how it looks like.

Please visit my home page. Any comments and suggestions are welcome.

Home page: http://www.geocities.com/CapeCanaveral/6062/xlCBT.htm

If you encounter any problems, please contact me via e-mail at:

Email: huangng@geocities.com

What's new?

What's new in version 1.11?

> a. fix two bugs in runtime of version 1.1:
>
>> * run time error when "Skip to" is defined in topic flow.
>>
>> * incorrectly delete drawings created by entrance macro
>
> b. fix one bugs in authoring tool of version 1.1
>
>> * run time error when recording macro under a specific condition.

What's new in version 1.1?

1. The xlCBT Authoring Tool supports both MS Excel 95 and 97. The xlCBT Runtime supports MS Excel 5.0, 95, and 97.

1. Add validation function creation wizard. It helps you create validation functions without write a single line of VB code.

1. Interface change in the macro dialog box.

1. Revision of runtime.

1. Add a show runtime function.

1. Manually import runtime and validation function when running under MS Excel 97.

Installation

File xlCBT.zip contains six files:

xlCBT.xla	xlCBT Authoring Tool version 1.11 for Microsoft Excel 95 and 97
xlCBT.hlp	xlCBT Help file
xlCBT.cnt	xlCBT Help file
xlCBTDemo.xls	xlCBT demo file
FILE_ID.DIZ	Descriptions
Readme.txt	Read me file

To install xlCBT:

1. Unzip file xlCBT.zip to C:\MSOffice\Excel\Library directory (Excel 95) or C:\Program Files\Microsoft Office\ Office\Library directory (Excel 97), where the Excel add ins store. **Note** that the full path of Library may be different in your computer.

1. Run Excel, select **Tools | Add-ins…** command.

1. In the Add-ins dialog box, check xlCBT Authoring Tool.

1. Click on the **OK** button.

No expiration date in xlCBT Authoring Tool and Runtime. If you only want to see the demo file, just unzip the file and open the demo file using Microsoft Excel ™.

The demo file is bigger than that of version 1.0 because it was saved as Microsoft Excel 97 & 5.0/95 Workbook format.

To uninstall xlCBT:

1. Run Excel, select **Tools | Add-ins…** command.

1. In the Add-ins dialog box, uncheck xlCBT Authoring Tool.

1. Click on the **OK** button.

1. Delete xlCBT files in the installation directory mentioned above.

Please visit my home page. Any comments and suggestions are welcome.

Home page: http://www.geocities.com/CapeCanaveral/6062/xlCBT.htm

If you encounter any problems, please contact me via e-mail at:

Email: huangng@geocities.com

xlCBT Runtime

When a xlCBT document is opened by Microsoft Excel ™, the runtime runs. The runtime is for a reader to display and read the document. The runtime displays one topic a time. It displays another topic when a reader clicks on the navigation toolbar. In this way it displays topics one by one.

The first thing the runtime did is to active the contents sheet and initialize navigation bar. Click on the contents item to start a session. Use navigation toolbar to navigate among the materials. It is designed easy to learn, easy to use.

Try the file xlCBTDemo.xls and see how it works.

Overview

A xlCBT document consists of a series of topics. The xlCBT Authoring Tool is a tool to organize these topics including links, sticky labels, and macros.

These xlCBT components are stored in the same Excel document. Additions to the sheets that store your data in the document, three more sheets are added to the document: xlCBTScript, xlCBTData, xlCBTFunc, and xlCBTRun.

xlCBTScript: This worksheet is used to store the topic settings, links, macro name, and function name.

xlCBTData: This worksheet is used to store sticky labels. User-defined icons are also stored in this worksheet.

xlCBTFunc: This sheet is used to store macros and validation functions.

xlCBTRun: This is a hidden module sheet which contains the copy of runtime. You can use show runtime function in **Content** dialog box to display it.

Four steps to prepare an xlCBT document:

1. Create an xlCBT document.

> Open an exist workbook or create a new one. Create script sheets in this file by clicking on any button in the xlCBT Authoring Tool bar. One copy of xlCBT Runtime is also copied at the same time.

2. Compose topics

1. Input data: Type in the data that you want to present.

1. Name a topic: give a name to the topic by clicking **Current** button in xlCBT Authoring Tool bar.

1. Add drawings: Add any drawings you like, such as a text box with explanations and an arrow that points to your data.

1. Make these drawings a sticky label: Click **Sticky label** button in xlCBT Authoring Tool bar.

1. Record the topic: Click **Layout** button in xlCBT Authoring Tool bar.

> Repeat 2-5 to prepare more topics.

3. Define links among topics

> Use **Navigation** button in xlCBT Tool bar to create or edit the links among topics.

4. Generate the table of contents

> Use **Contents** button to generate a table of contents.

Finished and run

> Run it. Click on the contents item to run it.

Icons dialog box

Copies an arrow or an icon to current worksheet. An arrow or an icon is usually used with other drawings to make up a sticky label.

Copy an arrow:

Select the arrow you want to copy and click on it. The arrow will be directly copied into current worksheet. Later, you can change its position, size, color, or other properties of the arrow to meet your requirement.

Copy an icon:

1. Select an icon name from the **System defined icons** or **User-defined icons** drop down box.

1. Click on the **OK** button.

1. After the icon is copied, you can change its position, size, color, or other properties. Sometimes you have to ungroup it, such as "Tab Label".

Note: The user-defined icons are icons that a user defines and stores in worksheet "xlCBTData" with the name beginning with "xlUsr". It is recommended that all user-defined icons be store in column "AA" in "xlCBTData" worksheet.

Sticky label button

Creates or destroys a <u>sticky label</u> for current topic.

It is functional only when there is at least one drawing on current worksheet.

To create a sticky label:

1. Select one or more drawings that you want to become part of the sticky label.

1. Click on the **Sticky label** button.

Note: If there are drawings in the current worksheet and you do not select any one, all drawings will be selected to make up a sticky label.

To destroy a sticky label:

1. Select the sticky label you want to destroy.

1. Click on the **Sticky label** button.

Layout dialog box

Records the current screen layout settings of a <u>topic</u>.

Note: Prepare all following setting before clicking **Layout** button.

The settings are:

Worksheet name and top left location: Records current worksheet name and top left location. When redisplaying this topic, the same worksheet will be displayed with the same top left location.

Cells selected: Records the cells selected. When redisplaying this topic, the same selected cells will be selected. You can also select ranges of cells by clicking the cells while holding on Ctrl key.

Zoom magnification: Records zoom magnification. When redisplaying this topic, the same zoom magnification is used to display the worksheet.

Sticky label: Records the <u>sticky label</u>. The sticky label should be prepared using "<u>Sticky label</u>" button in xlCBT Authoring Tool bar before it can be recorded. When redisplaying this topic, the sticky label will be displayed in the same position. If there is no sticky label to be recorded on current worksheet, this selection is disabled.

Delete sticky label: Delete the sticky label recorded previously.

If it is the first time you record the topic, **worksheet and top left location** is must and the other selections are set to on by default. If it is not the first time you record the topic, all selections are set to off by default and you can overwrite part or all of the settings.

Macro dialog box

Records or edit macro and validation functions.

Entrance macro: Record an entrance macro. An entrance macro runs when entering current topic during runtime. It is used to do something on the worksheet during the progress, such as dynamically input data.

Leave macro: Record a leave macro. A leave macro runs when leaving current topic during runtime. It is used to do some clearing work.

Entrance validation: Create and edit an entrance validation function. An entrance validation function runs when entering current topic during runtime. The progress goes forward if this function success (return true value). If this function fails (return false value), the progress can go ahead. It is recommended that you give your readers some message to explain why the progress doesn't go ahead. For example, you ask your reader to type a formula but he/she failed to do so.

Leave validation: Create and edit a leave validation function. It is the same as entrance validation but runs when leaving current topic during runtime. You choose entrance validation or leave validation according your needs.

Unprotect worksheet: Usually the worksheet is protected so that readers can not change data on the worksheet. Sometimes you want your readers to do tasks that require the worksheet unprotect, such as Solver.

Cells to be unlocked: It is used when you want your readers to be able to change data in a specified range. You can set separate ranges by clicking these ranges while holding on Ctrl key. Input a reference, such as Sales! $B$7:$B$8,Sales!$B$11. This means that cells B7,B8, and B11 in Sales worksheet will be unlock and a reader can input data into these three cells. You can just use mouse to click on these cells to input their reference.

Navigation dialog box

Set navigation flow among topics.

When Navigation button is clicked, the worksheet "xlCBTScript" is displayed for you to set the navigation links.

In each bellow box, input a reference to a topic in column C. For example, input =C12 (or =$C$12) in Next box and in Hint box input =C13 (or =$C$13) when your current topic is in cell C11. You can also click that cell using mouse. The topic name will display in the correspondence cell. You define the sequence of the topics in this way.

Previous: Explicitly set previous topic. If this box leaves blank, the previous topic is implicitly the one that has just been visited.

Browse: Set alternative next topic.

Next: Set next topic.

Hint: Set hint topic. Hint topic is used if you want to give your readers more information (hints, tips, or details).

Show me: Set show me topic. Show me topic is used if you want to run macro to show your readers details.

Skip to: Skip current topic and directly go to the target topic.

Disable contents button: Disable the contents button in the xlCBT Navigation toolbar.

Current dialog box

Set current topic or title.

Refresh current: Refreshes the screen display of current topic for checking. If you don't satisfy with the looks of the topic, make some modification and record the settings again.

Rename sheet: used to rename a worksheet. It will rename the worksheet and change the related setting information in the recorded script. Please do not directly use Excel function to rename a worksheet, such as renaming worksheet using the sheet tabs.

Change current: Change the name and description of current title, or the description of current topic. Click on the **OK** button to save the changes.

Delete current: Delete current title or current topic together with its sticky label if it is a topic. This option doesn't delete the macro and validation function attached to the topic. You should delete them manually.

Insert a title: Type the title name in the **name box** and description in the **description box**. Click on the **OK** button to insert a title just after current position.

Insert a topic: Type the topic name in the **name box** and description in the **description box**. Click on the **OK** button to insert a topic just after current position.

Notes:

1. A topic name should follow the rules of naming a variable. That is

    - The first character must be a letter.1

    - You cannot use a space, period (.), exclamation point (!), @, &, $, or # in the name.

1. A topic name must be unique in a document.

1. A topic name can not be changed after you record something with the topic.

Contents dialog box

Generates the table of contents and do tasks related to distribution of the material.

Generate contents: Generate the table of contents. In the **at location box** select the location where you want to put the table of contents. For example, you have a contents sheet called Contents and want to put the contents in that sheet near its top left corner. You can input Contents!$A$1 in the location box. You can just click on that cell to input its reference.

When xlCBT generates a table of contents, all titles in the script sheet (xlCBTScript) will be put to the table of contents. The title under that has topics is converted into check box, acting as the start point (the first topic bellow that title) of the session. The title under that has not topics is converted into text box, acting as a higher level title to group some sessions. The lesson title is in cell A3 and is converted into a text box with bigger font.

Hide script sheets: Hide and protect the script sheets (named beginning with "xlCBT") that record all settings and sticky labels so that the reader can not touch them and modify them. A module sheet named "xlCBTRun" that contains the runtime is always hidden.

Show runtime: Show the runtime code in module sheet (Excel 95) or Microsoft Visual Basic window (Excel 97). If the runtime does not exist in the current workbook for some reason (*e.g.* you did not import the runtime manually when creating script sheets in the current workbook when you run Excel 97), this selection is disabled. However, you can use **Update runtime to version 1.11** to create one.

Initialize navigator toolbar: Initialize navigator toolbar so that you can run it.

Update runtime to version 1.11: If the runtime is not version 1.11 or it does not exist in the current workbook for some reason (*e.g.* you did not import the runtime manually when creating script sheets in the current workbook when you run Excel 97), use this function to update or create it. Otherwise, this selection is disabled.

Prepare for distribution

See also

When you finish your work, do followings:

1. Carefully check whole document one topic by one topic using **Next** button in xlCBT Authoring Tool bar. This will make sure that all topics have been designed and worked properly.

1. Use spelling check to check all sticky labels in worksheet "xlCBTData".

1. Check the links of topics. It will be easier if you check them in worksheet "xlCBTScript".

1. Check macros and functions

1. Run the document for test, mainly checking links and macros.

1. Run **Contents** again to generate the table of contents. Hide the script sheets.

1. Improve the table of contents. For example, rearrange the content items into two columns.

Limitation and known problems

1. Do not change a worksheet name in the sheet tabs. Use **Rename sheet** in **Current** dialog box to change the worksheet name.

1. A topic name should follow the rules of naming a variable. That is

    -   The first character must be a letter.

    -   You cannot use a space, period (.), exclamation point (!), @, &, $, or # in the name.

1. A topic name must be unique in a document.

1. A topic name can not be changed after you record something with the topic.

1. The workspace is limited to worksheets. If you want to show your data by charts, put the charts into a worksheet.

Technical supports

For client supports and upgrade, visit my home page:

Home page: http://www.geocities.com/CapeCanaveral/6062/xlCBT.htm

Major upgrade will be published to shareware site. Minor upgrade will be available only in this page. Please regularly visit this page.

If you encounter any problems, please contact me via e-mail at:

Email: huangng@geocities.com

License agreement

See also

xlCBT version 1.11 - xlCBT (Computer-Based Training) Authoring Tool for MS Excel 95 and 97

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xlCBT version 1.11 is shareware. You can distribute the software freely as is. You can register as a regular user. As part of the registration, you will receive the registration key, free updates and customer supports (by E-MAIL) for one year.

Free 30 days trial. Registration fee: $10.00. Send the registration fee (US$10) to the author:

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Sticky label

The sticky label is one or more drawings grouped together and functioned as a label firmly sticking to a topic. When a topic is displayed, the sticky label is also displayed at the same time.

Topic

A topic is all data elements on the screen at one time. A topic has two parts: data on the worksheet and a <u>sticky label</u> with text and graphs. The xlCBT runtime displays topics one by one to show the information to a reader.

xlCBT document

An xlCBT document is a Microsoft Excel ™ workbook prepared by xlCBT Authoring Tool. It contains a copy of xlCBT runtime and scripts of computer based training materials.

Can not operate with a title

Current is a title. No settings or macros can be recorded to a title.

Use **Previous** / **Next** in the Authoring Toolbar to select another topic.

Can not operate with a topic without name

A topic should have a name. The name should be unique in the worksheet and follow the common rules of naming variables. That is:

- The first character must be a letter.

- You cannot use a space, period (.), exclamation point (!), @, &, $, or # in the name.

Use **Current** in the Authoring Toolbar to name current topic. Or use **Previous** / **Next** in the Authoring Toolbar to select another topic.

Warning: An empty topic

The current topic is empty. That means no setting has been recorded to this topic. It may cause runtime error.

Use **Layout** in the Authoring Toolbar to record topic settings.

Create script sheets

Click "Yes" if you want to create script sheets in current workbook. The xlCBT will create three sheets that are used to record the scripts and macros. The xlCBT runtime will be copied to current workbook, too.

Import or update runtime

When you are running MS Excel 97, your should import your runtime manually into current workbook after the runtime was created.

After clicking **OK** button in the message box that bring you to this on line help window, a notepad window was opened with the runtime. You go to Microsoft Visual Basic window and copy the runtime into current workbook.

1. Select Tools | Macro | Visual Basic Editor command from the main menu of Microsoft Excel Window.

1. Find **Module1** under your file name title in the project –VABproject sub window. Double click it's name and a new window will appear.

   Note: The module name may be not **module1**, or it is called xlCBTRun if your are updating the runtime.

1. Click on that new window. Clear (delete) all exist code in it if your are updating the runtime.

1. You have two choice:

   • Copy all text in the notepad window and paste it into this window.

   or

   • In the menu select **Insert | File…** command. A file selection dialog box will appear.

   • Select the runtime file. The runtime file is called "**xlCBT.txt**" and is in the same directory as the file xlCBT.xla. Usually it is in (it's up to your installation):

   C:\MSOffice\Excel\Library directory (**Excel 95**)

   C:\Program Files\Microsoft Office\Office\Library directory (**Excel 97**)

   • Click **Open** button to import. You will see the runtime code is in the window.

Note: These procedures are very similar to import validation function.

Import validation function

When you are running MS Excel 97, your should import your validation function manually into current workbook after the validation function was created.

After clicking OK button in the message box that bring you to this on line help window, a notepad window was opened with the validation function. You go to Microsoft Visual Basic window and copy the validation function into current workbook.

1. Select Tools | Macro | Visual Basic Editor command from the main menu of Microsoft Excel Window.

1. Find **Module2** under your file name title in the project –VABproject sub window. Double click it's name and a new window will appear.

   Note: The module name may be not **module2**. It is recommended that the runtime and validation function be stored in separated modules.

1. Click on that new window.

1. 4. You have two choice:

   - Copy all text in the notepad window and paste it into this window.

   or

   - In the menu select **Insert | File…** command. A file selection dialog box will appear.

   - Select the validation function file. The validation function file is also in file "**xlCBT.txt**" and is in the same directory as the file xlCBT.xla. Usually it is in (it's up to your installation):

     C:\MSOffice\Excel\Library directory (**Excel 95**)

     C:\Program Files\Microsoft Office\Office\Library directory (**Excel 97**)

   - Click **Open** button to import. You will see the validation function code is in the window.

Note: These procedures are very similar to import runtime.

Update xlCBT Authoring Tool to version 2.0 or above

The document you are editing was prepared by xlCBT Authoring Tool version 2.0 or newer. The current version of xlCBT Authoring Tool is bellow 2.0 and can not work on that document. You should update xlCBT Authoring Tool to version 2.0 or newer. For more information, please visit:

http://www.geocities.com/CapeCanaveral/6062/xlCBT.htm

Validation function wizard

See also
_____

Validation function is a function that is called when an end user enters or leaves a topic. Usually it is used to make sure an end user has finished some work.

An example: you might want your student to input text "Item" in cell B2 before he goes to next topic. In this case, you are creating a leave validation function. Input $B$2 in the **Cells in which an end user types** box and type "Item" in the **text** box. Click **Ok** button and the validation function is created for you without writing a single code.

Three steps to create a validation function:

1. **Cells in which an end user types**: A cell or a range of cell reference. The validation function will check the contents of these cells (formula or text). A range of cell is used when you want to check this range have same formula (copied).

1. **should equal to one of (only one of):**

   cell: The contents of cell or cells being checked should equal to that of this cell.

   0 R1C1: The contents of cell or cells being checked should equal to the formula express in R1C1 format.

   1 Test: The contents of cell or cells being checked should equal to the text typed here.

   2 Number: The contents of cell or cells being checked should equal to the number input here.

1. **Display message if validation fails**: The message you want the validation function displays if validation fails.