UcamX
User Interface Guide

Ucamco Software
October 2017

Ucamco
Former Barco ETS

October 2017

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Correspondence regarding this publication can be sent to:

Ucamco NV
Bijenstraat 19,
B-9051 Gent,
Belgium

For more information:

Our web site: http://www.ucamco.com

E-mail: info@ucamco.com

About Ucamco
Ucamco (formerly Barco ETS) is a market leader in PCB CAM software, laser photoplotting and direct imaging systems, with a global network of sales and support centers. Headquartered in Ghent, Belgium, Ucamco has over 25 years of ongoing experience in developing and supporting leading-edge photoplotters and front-end tooling solutions for the global PCB industry. Key to this success is the company's uncompromising pursuit of engineering excellence in all its products.

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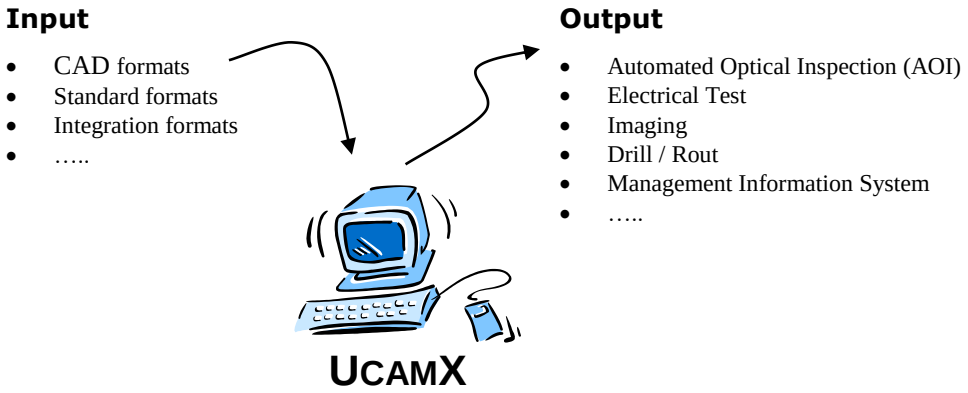
1 Introduction

1.1 Ucamco's CAM Products

This installer contains Ucamco's range of CAM software products, including UCAMX and various machine frontends for AOI, Electrical Test and plotting.

UCAMX is Ucamco's newest pre-production engineering solution for the electronics manufacturing industry. It is developed to provide PCB manufacturing with zero-defect tooling. UCAMX can accept a wide variety of PCB data as well as generate all data and process information for your production equipment.



1.2 About This Guide

This Guide is aimed at UcamX operators and explains how to make optimal use of the new dockable interface.

The following conventions are used in this document:

Note:	Provides essential extra information.
Tip:	Provides useful extra information.
Example:	Contains examples of file syntax, commands, settings, etc.
Warning:	Contains an important warning.

1.3 Other Available Documentation

Ucamco offers its customers a wide range of documentation on all its software - including installation requirements and procedures, release information, detailed task descriptions and info on customer support availability. Specifically for its range of CAM products the following documents are available.

Ucamco Software Installation Requirements

This Guide aims at prospective users and outlines the equipment required to run Ucamco's CAM products, including UCAMX and various machine frontends.

You can download this manual from our ftp server ftp.ucamco.com

License Server Installation Manual for Windows

A document explaining how to setup/upgrade a license server and how to obtain and install a valid license file.

You can download this manual from our ftp server ftp.ucamco.com

Online Help

Each new software installation comes with an updated version of the extensive, context-sensitive online help system.

The online help contains referential information as well as step-by-step task descriptions, a detailed index, a glossary and a full text search function to facilitate quick troubleshooting and swift problem-solving for complex issues.

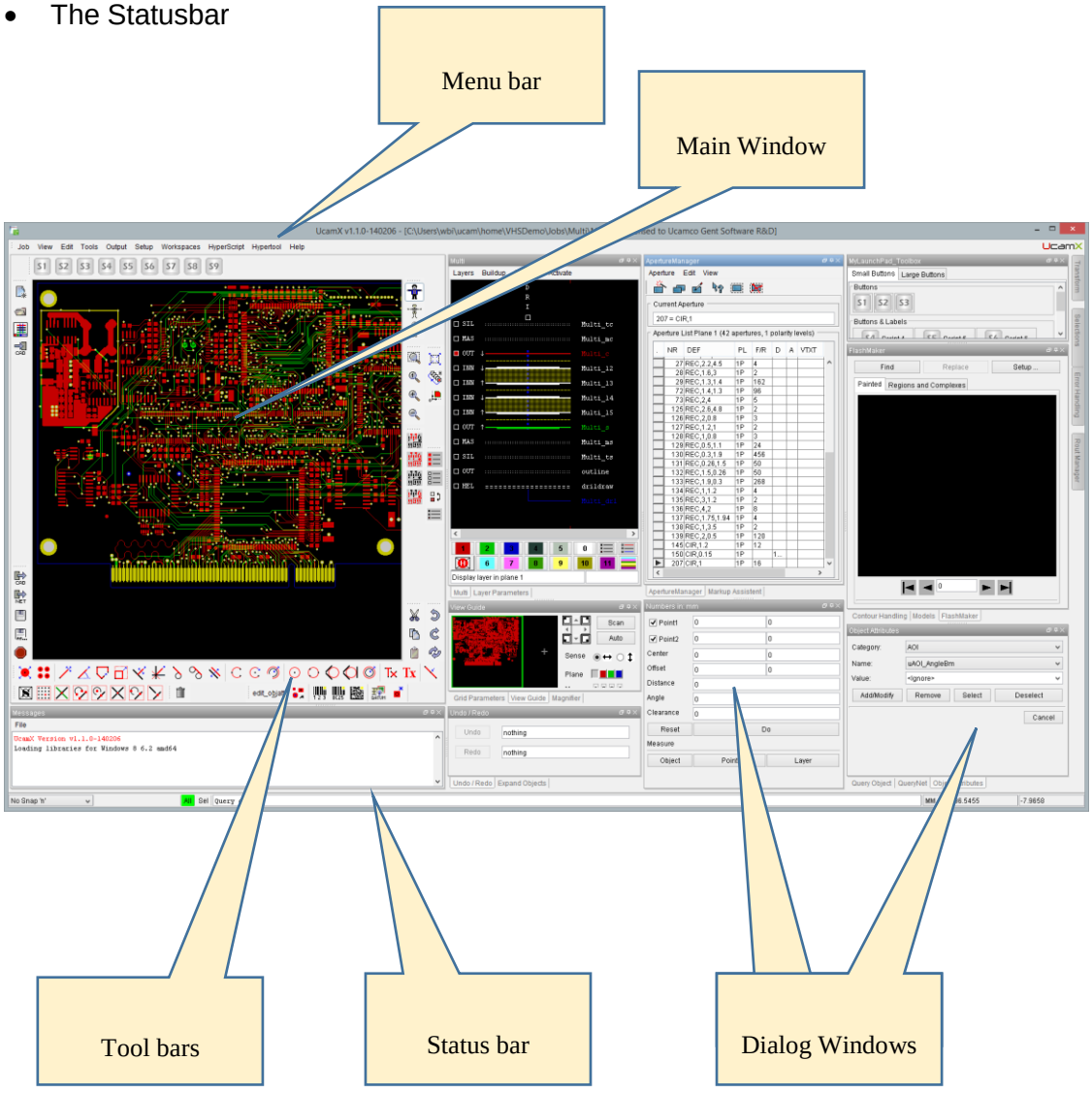
2 Dockable GUI

In complex CAM software there is a need to keep a large quantity of application windows visible on screen at the same time. Often a dialog has to be moved to access an underlying one. Sometimes you lose track of a dialog because it got hidden by an overlapping dialog. This is where a Dockable GUI brings help.

In a dockable GUI all windows, dialogs, toolbars and menus are “snapping” to each other. This way the interface elements are not overlapping and remain visible all the time.

The UcamX dockable interface has 5 interface elements

- The Main Menubar
- The Main Window
- The Toolbars
- The Dialog Windows
- The Statusbar



Chapters 3 to 7 describe all interface elements in detail.

3 The Main Menubar

The UcamX Main Menubar is a standard Windows application menubar.

3.1 Content

Click a menu entry to see the menu options.

- menu options ending on "…" show an application dialog
- menu options with an arrow have sub-level menu options
- menu options without "…" or arrow perform an action (e.g. build netlist)

Note: Toolbar Manager can be used to add/remove menu entries

3.2 Properties

Right click the Main Menubar to see/set its properties

- Rearrangeable
- Floatable
- Hidable

3.2.1 Rearrangeable

When activated

A handle bar (row of dots) is added in front of the element.
Click on the handle bar to move the element around:

- to make a docked menu floating
- to move it to another docked position

When deactivated, the handle bar is not visible and the menubar cannot be moved from its current location.

Tip: Use this option to keep all menu's in place.

3.2.2 Hidable

Note: This option is only useful for toolbars

3.2.3 Floatable

When activated (and rearrangeable is activated)

The Main Menubar can be changed into a floating menu by dragging its handle bar out of its docked top or bottom position to any position on the desktop. Move this floating menu to the top or bottom of the Ucam Window to dock the menu as a normal application menu

When deactivated

Menu cannot be dragged out of its current location

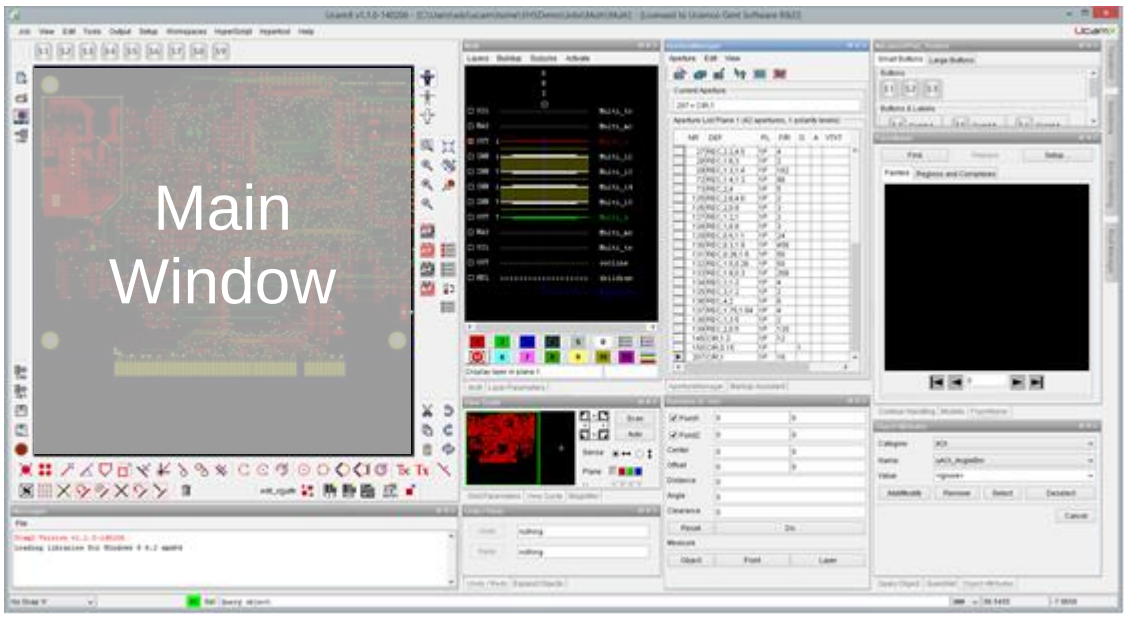
4 Ucam Main Window

The Ucam Main Window is the area where the contents of the layers is displayed.

Note: Use the Layer Editor to set the visibility of the layers

Around the Main Window there are 4 areas where toolbars can be placed

Warning: dialogs placed (docked) inside the Main Window cannot not be saved in the workspace layout, so do not use this area to place your dialogs.



5 UcamX Dialogs

Dialogs are small windows designed to interact with the user. UcamX dialogs are dockable. This means that when dialogs are moved and/or resized, their boundings will snap to each-other and the dialogs will not overlap.

5.1 Dialog types

UcamX dialogs can be:

- Application dialogs
- User defined Launchpads
- The “Messages” window

5.2 Properties

Right click a dialog title bar to see/set its properties

If the dialog is not dockable it will be displayed in the default Windows style and the context menu will show the default options for a Windows dialog.

If the dialog is dockable it will be displayed in the selected interface style (see: Selecting a default Windows Style) and the context menu will show 4 toggles:

- **Floating** - can also be set using icon in title bar of dialog
  If activated the dialog undocks and becomes a floating dialog
  If deactivated the dialog docks to its last known position
- **Auto Hide** - can also be set using icon in title bar of dialog
  If activated the dialog will:
  - stretch to the full height of the screen
  - collapse/hide to the right side only showing a tab with the dialog name. click the tab to show/hide the dialog

  Tip: Use auto-hide for Select and Transform dialogs.
  All tabbed dialogs are concatenated into one full height dialog.

  If deactivated the dialog becomes floating
- **Maximize**
  If activated the dialog goes full screen and the property name changes to **Restore**. Use this option to restore the dialog back to its original size and location.
- **Dockable**
  When activated the dialog can be docked.

  Note: This toggle is always active when a dialog is docked.
  When deactivated the dialog becomes floating and non dockable.

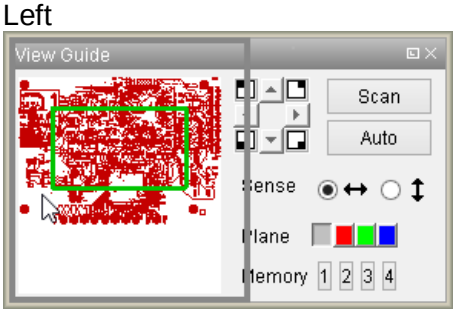
5.3 Docking a floating dialog

To dock a floating dialog on a specific location

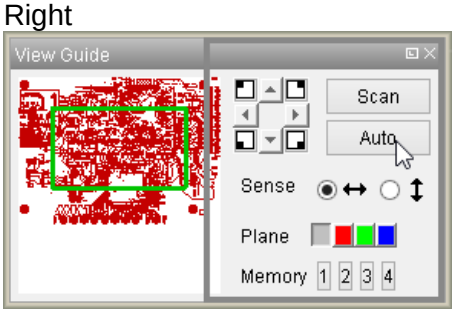
Note: Click the Control key to avoid docking the dialog on release

1 Drag the dialog to your desired location – a ghost dialog boundary will appear showing the locations where the dialog can be placed.

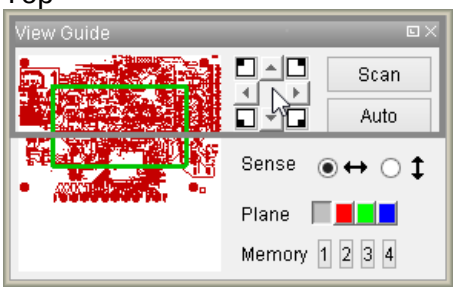
Left



Right

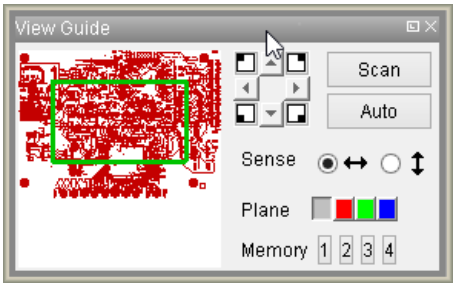


Top



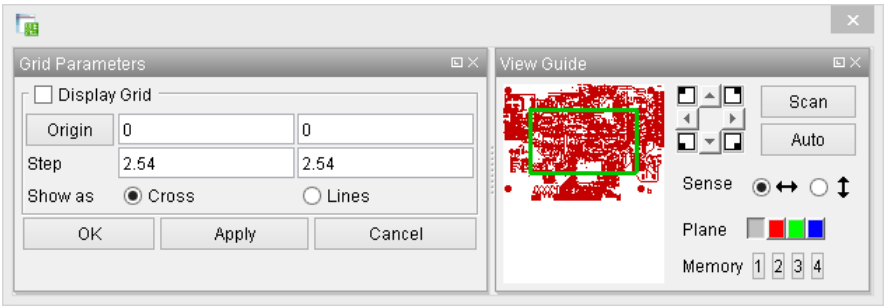
Bottom

Full overlap

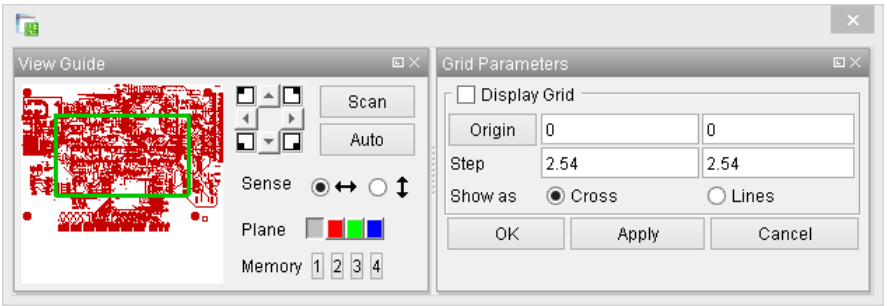


2 Release the mouse when the location is OK

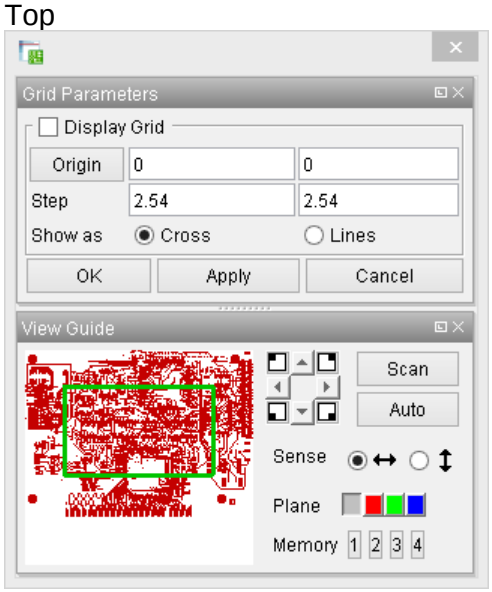
Left



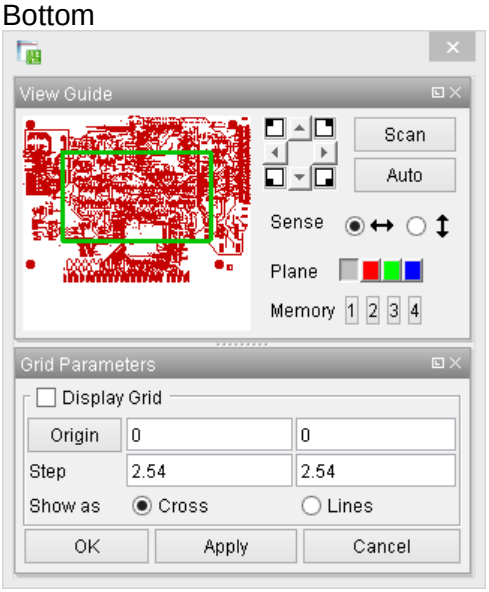
Right



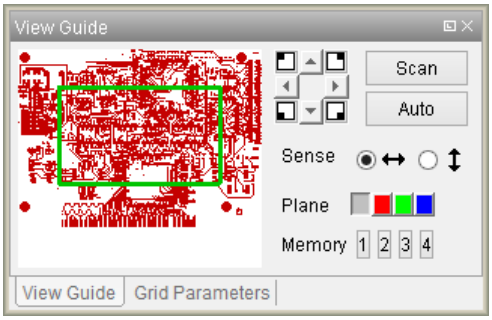
Top

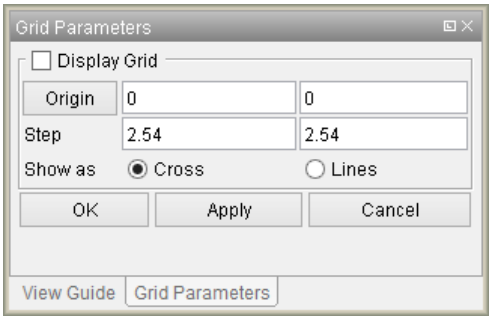


Bottom



3 When docking a dialog completely over an existing dialog, tabs will be created. Click a tab to see the corresponding dialog





5.4 Undocking a docked dialog

To undock a docked dialog and make it floating again

1 Drag the dialog out of its docked location by dragging the menu bar away from its docked position.

2 Release the mouse when the position is OK
The dialog (and its tabs, if available) is moved to the new position.

Tip: You could also deselect the Dockable toggle in the dialog properties

Note: To undock a tabbed dialog, drag it out by its tab.

6 Toolbars

A toolbar is a collection of selectable image "buttons" that give the user an easy way to select application functions.

Toolbars can be placed in areas on the 4 sides of the Main Window

Horizontal toolbar areas (North & South of Main Window) have 1 or more rows of toolbars. Each row can have multiple toolbars placed after each other.
The visibility of the toolbars is limited by the width of the main window.

Vertical toolbar areas (West & East of Main Window) have 1 or more columns of toolbars. Each column can have multiple toolbars placed under each other.
The visibility of the toolbars is limited by the height of the main window.

6.1 Content

The content of the toolbars is defined using the Toolbar Manager (See Chapter 8)

6.2 Properties

Right click any toolbar to see/set the properties of all toolbars

6.2.1 Rearrangeable

When activated

A handle bar (row of dots) is added in front of the toolbar.
Click on the handle bar to move the toolbar around:

- to make a docked toolbar floating
- to move a toolbar to another docked position

When deactivated

The handle bar is removed

All toolbars (floating and docked) are fixed on their current location

6.2.2 Hidable

When activated

The Show/Hide toggles can be used
e.g to select which toolbars to display/hide

When deactivated

The Show/Hide toggles are dimmed
and the visibility of toolbars cannot be changed

6.2.3 Floatable

Note: Only useful when Rearrangeable toggle is activated

When activated

toolbars can be dragged out of their docked location to become floating toolbar windows

When deactivated

Interface elements cannot be dragged out of their docked location

7 Workspaces

A workspace is a saved layout of all windows, dialogs and toolbars needed to perform a specific task. Working with workspaces is more productive because at any time the user can select a working environment that is most suited for the process step he is performing. E.g. a workspace for customer data input would show a Main Window with Job Editor, Layer Parameters, Aperture Manager, Select & Transform and offers easy access to SmartStart, GAR and Wheel Editor.

Tip: Saving a workspace also saves the current location of all floating dialogs. This is very useful for fixing the display position of large dialogs like SmartStart, GAR, Uplot, … and dialogs that are currently not dockable.

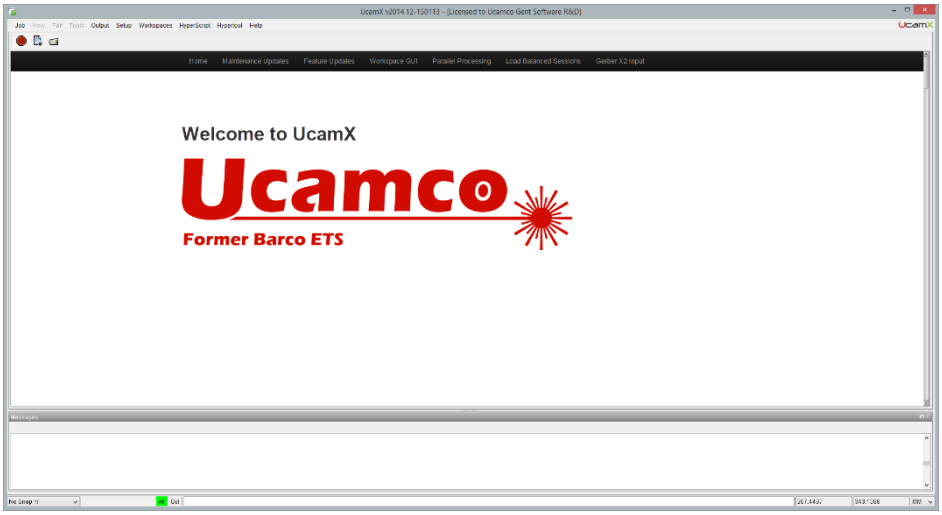
7.1 Default Workspaces

Ucam comes with 3 default workspaces:

Startup

This workspace is used

- when launching UcamX
- when closing a job



The Main Window contains a one page html with navigation menu.

Click the menu items to see following pages:

- Home - Welcome message with logo
- Maintenance Updates – Issues fixed in this UcamX release
- Feature Updates – Features updated in this UcamX release
- Feature Slides – Summary slides taken from UcamX release notes

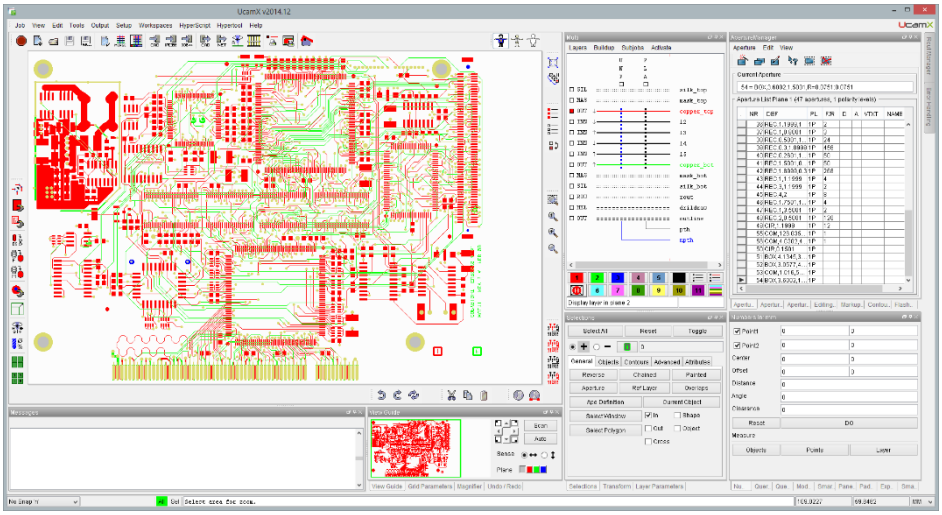
Tip: If you want to receive the latest UcamX news, tips & updates, make sure your workstation is connected to the internet.

The toolbar for this Workspace allows you to start processing jobs.

Job

This workspace is used

- when creating a job
- when opening a Job



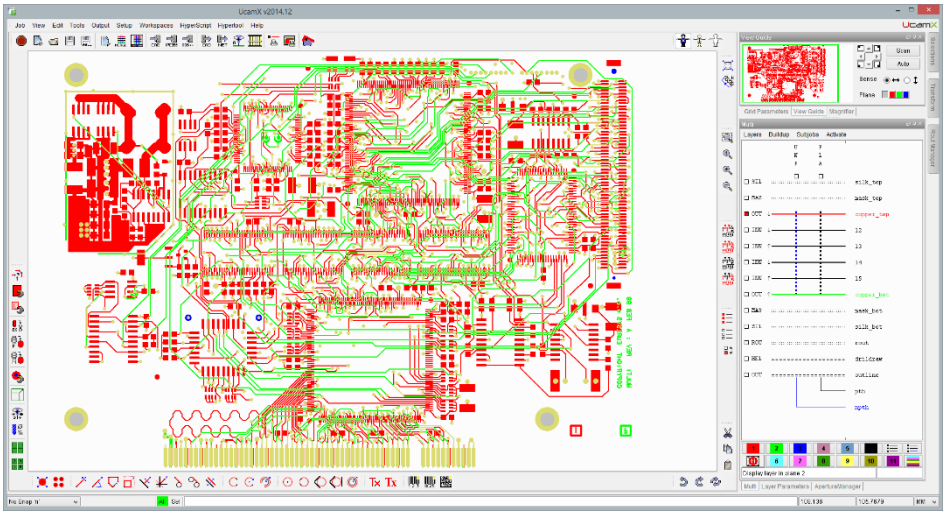
This Workspace contains all functionality needed to create a job, define its buildup and perform all preparations for DRC

2 sets of toolbars are provided:

- A set of modular toolbars (prefix #) to be (de)activated or moved at will.
- A set of large toolbars with more functionality (cfr Ucam).

Maxi-main

This workspace is used for operations where a large Main Window is needed.



2 sets of toolbars are provided:

- A set of modular toolbars (prefix #) to be (de)activated or moved at will.
- A set of large toolbars with more functionality (cfr Ucam).

Tip: Use this workspace as a start for designing a multi-screen Workspace.

7.2 How to create a custom Workspace

1 Open UcamX
2 Open a job (if required for your workspace)
3 Open all dialogs needed for this workspace
4 Resize the Main window to desired dimensions
5 Add toolbars where needed
6 Dock open dockable dialogs
   - to the Main Window
   - to the right as auto-hide dialog
   - to each other (also on a second screen)
7 Resize and place large & non-dockable windows to desired location
8 Save Layout

Tip: If you would like to create a new workspace with a layout that is similar to an existing one, than open this workspace, use the Save As option to create a duplicate and start from there to define your new workspace. Save the workspace when all changes are applied.

Tip: UcamX workspaces load faster when less dialogs are open. Close all overlapping dialogs that do need to be visible on first access and resave your workspace. All closed dialogs will appear on the right position when accessed.

7.3 Workspaces Menu

	Reload	Restores the current Workspace to its initial view.
	Save	Updates the current Workspace
	Save As…	Saves the current dialog views into a new Workspace
	Lock	Locks the current Workspace preventing changes.
	Undo	Undo last change to the Workspace
	Redo	Redo last change to the Workspace
	Delete	Remove Workspace
	Job	Default Workspace when opening a Job
	Startup	Default Workspace when launching UcamX

7.4 Optimizing Workspace Performance

The loading speed of Workspaces is heavily influenced by the number of open dialogs. You can make a workspace faster by closing all tabbed dialogs that are not visible when opening this workspace. When during a session a closed tabbed dialog

is called it will open in front and the previous shown dialog on that location will fall behind. Both open dialogs will receive a tab.

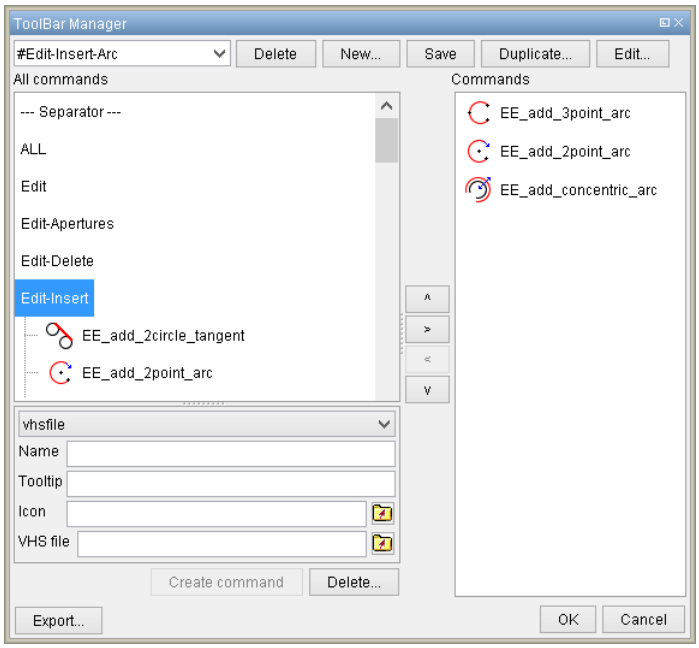
Benefits

- Faster load time of workspaces
- Larger and cleaner workspaces because there are no initial tabs
- Dialog names on tabs are better readable because only open dialogs have tabs

8 Toolbar Manager

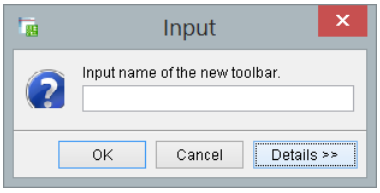
The Toolbar Manager is used to manage a set of toolbars.
Toolbars can be created, deleted, duplicated, renamed, saved and exported

In main menu select **Setup>Ucam>Toolbars …**



8.1 Create a new toolbar

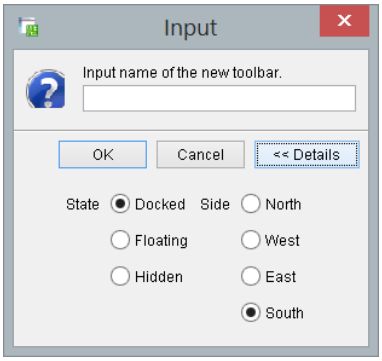
1 Click [New]



2 Enter a name for the toolbar

The next steps (3 to 5) are optional

3 Click [Details>>] to expand the dialog



4 Select the toolbar state (default: Docked)

5 If Docked, select where to place the toolbar

6 Click [OK] to save the new toolbar, or [Cancel] to quit the dialog

8.2 Add commands to a toolbar

1 Select toolbar from dropdown list
2 Double click the ALL group to see all available commands
or
Double click a command group name to expand its list of commands
3 Select a command
4 Click [>]
The selected command will appear in the toolbar commands list (right side)
5 Use up or down button to reposition a command within this list
6 Repeat steps 3 to 5 until the toolbar is complete
7 Click [OK] to save the toolbar

8.3 Add or Modify the icon of a command

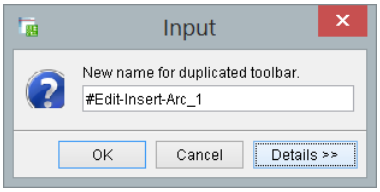
If a command has no icon or if you want to use a custom icon:

1 Place the new icon (e.g. `wr01_30.gif`) in the location defined by the ICODIR environment variable (default: `UCAM_BASEPATH\UcamX2015\icons`)
2 Select the command for which the icon needs to be added/replaced
3 Make note of the Command Name (e.g. `smartdrc_cfg1_0`)
4 Open the `Ucam.properties` file from the UCAM_CFG directory
5 Add a new line containing the icon label and icon name
e.g `smartdrc_cfg1_0.labelIcon: wr01_30.gif`
6 Save the Ucam.properties file
7 Restart UcamX

Note: To share icons (including custom icons) between users, copy the entire icons folder into the UCAM_CFG directory and use this folder for your new and modified icons. Remember to change the ICODIR.

8.4 Duplicate a toolbar

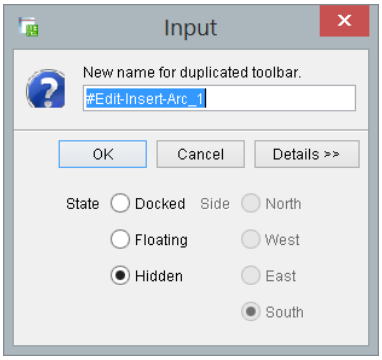
1 Select toolbar from dropdown list
2 Click [Duplicate]



3 Enter new name for toolbar (default: <currentname>_1)

The next steps (4 to 6) are optional

4 Click [Details>>] to expand the dialog



5 Select the toolbar state (default: Hidden)

6 If Docked, select where to place the toolbar

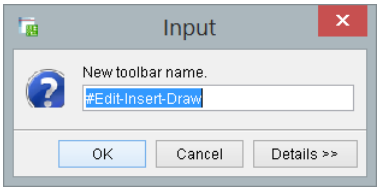
7 Click [OK] to save the duplicated toolbar, or [Cancel] to quit the dialog

8.5 Edit Name, State or Position of a toolbar

1 Select toolbar from dropdown list

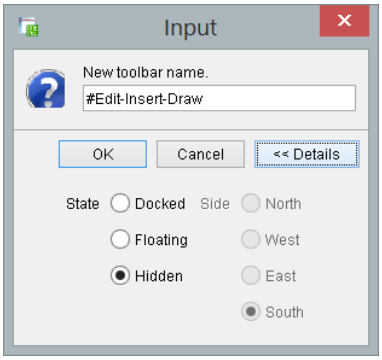
2 Click [Edit]

3 Enter new name for toolbar (default: <currentname>_1)



The next steps (4 to 6) are optional

4 Click [Details>>] to expand the dialog



5 Select the toolbar state (default: Hidden)

6 If Docked, select where to place the toolbar

7 Click [OK] to save the new toolbar settings, or [Cancel] to quit the dialog

8.6 Save toolbar modifications

- Click Save button → Save button greyed and dialog stays open

OR

- Click OK → Toolbar is saved and Toolbar Manager dialog is closed

8.7 Delete a toolbar

1 Select toolbar from toolbar dropdown list
2 Click [Delete]

Note: Only toolbars in Home directory can be deleted
Check Messages window to look for errors

Warning: Check before deleting a toolbar. There is no Undo!

8.8 Add a Custom VHS command to the source list

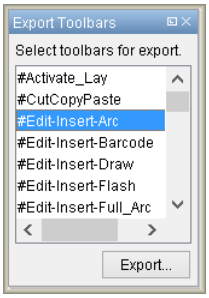
1 Select vhsfile or vhsscript from dropdown list
2 Enter name for new command
3 Enter tooltip
4 Select icon
5 If vhsfile: select script file
If vhsscript: enter vhs script
6 Click [Create command] – the command will appear in CUSTOM section and can be added to any toolbar

Tip: Only use the vhsscript option for very basic scripts (eg to display a value). Larger scripts should be tested and debugged in VHSEditor and added as a VHS source command using the vhsfile option.

Tip: You can use your own icon set. Most provided icons are square 25px or 27px transparent gif or png images but you can use icons of any size.
For private use, save your icons to a HOME\icons directory.
For shared use of icons see the note in section 8.3

8.9 Export toolbars

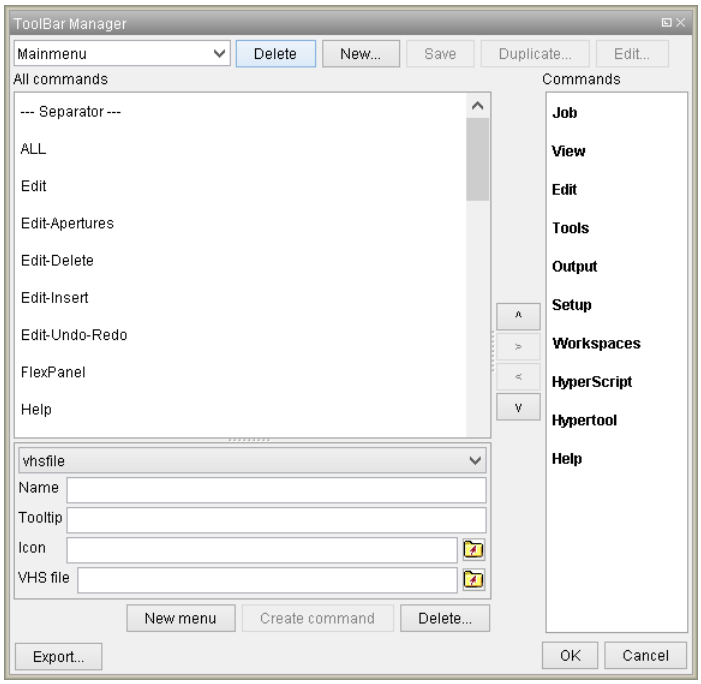
1 Click [Export…] on lower-left side of Toolbar dialog



2 Select Toolbars to be exported
3 Click [Export...] on this dialog
4 Select destination path and specify name
5 Click [Save]

8.10 Add a new (sub)menu to the Main Menu

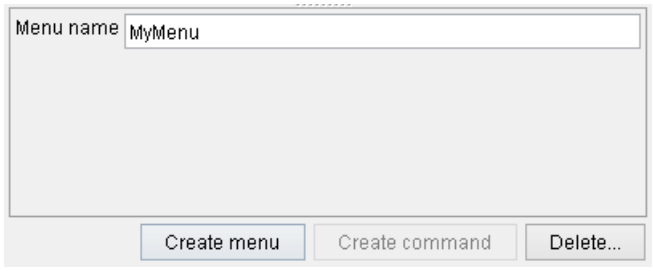
1 Select Mainmenu from dropdown selector



2 For a submenu, expand the menu to see location where change is needed

3 Click [New menu] to see New menu field

4 Enter the name of the new (sub)menu (e.g. MyMenu)



5 Click [Create menu] to add the (sub)menu to the end of the (sub)menu list

6 Use up down buttons to reposition the menu option (submenu only)

7 Click [OK] to accept

Note: Main menu entries can only be added to the end of the Main Menu

8.11 Add a command to a menu

1 Select Mainmenu from dropdown selector

2 Expand the menu to see location where change is needed

3 Select a command from the source command list

4 Click [>] to add command

5 Use up down buttons to reposition the command within the menu

6 Click [Save] to accept or [OK] to accept and close the dialog or [Cancel] to exit without modifications

8.12 Remove a command/menu

1 Select Mainmenu from dropdown selector
2 Expand the menu to see location where change is needed
3 Select the command/menu that needs to be deleted
4 Click [<] to remove the entry

Warning: There is no Undo!

5 Click [OK] to accept or [Cancel] to exit without modifications

Tip: For support reasons, it is good practice to leave the UcamX Main Menu untouched and to customize your UcamX environment by adding a custom menu or creating sets of custom toolbars.

9 Setup Ucam Interface Colors

To change the colors of the UcamX interface:

1 In main menu select **Setup>Ucam>Color…**

2 Click [Load] to get a stored Ucam or UcamX colordb file or click a color definition tab and set your color values (the image shows a color setup using RGB color values)

Tip: Use ucam.db key **color.setup.directory** to specify a default location for your color setups

3 Click [Apply] to see your changes

4 When satisfied, click [OK] to accept changes

Detailed info about color setup can be found in Ucam Help

- Select Help>On context …
- Select Setup>Ucam>Color

10 Setup Ucam Interface Style

UcamX has a number of pre-defined styles.

- VSNet, Eclipse, Eclipse3X, Office2003, Office2007 and Xerto (default)

The interface style can be set using Ucam.db parameter **setup.interface.style**

For each style there are a number of Look & Feel options.

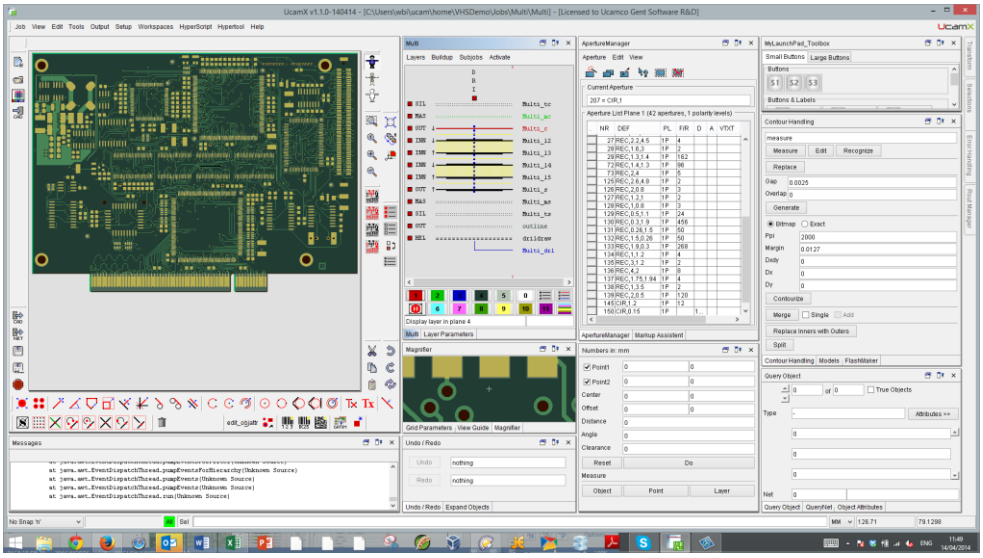
- Metal, Nimbus, CDE/Motif, Windows (default) and Windows Classic

The interface look & feel can be set using Ucam.db parameter **setup.interface.laf**

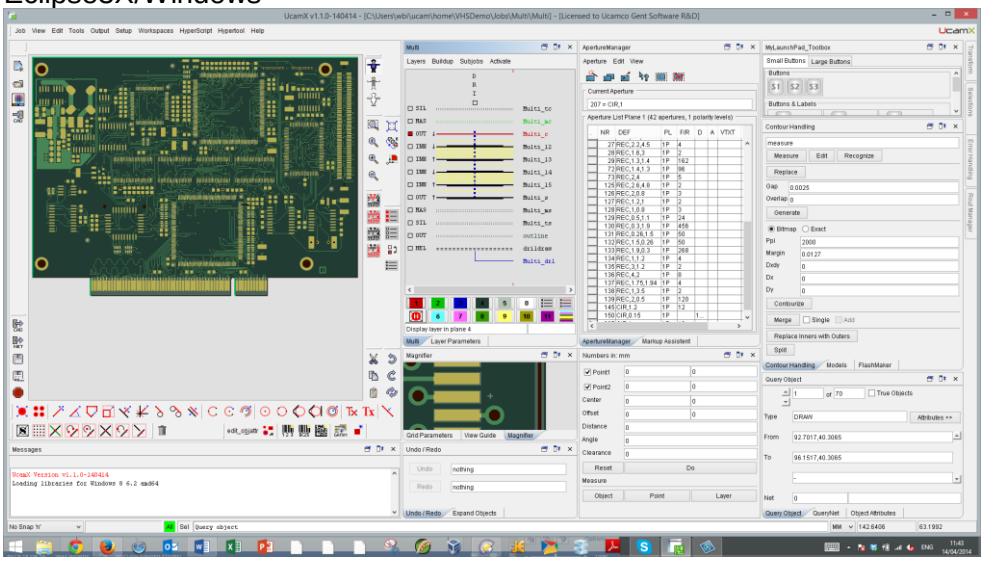
Some of the Style/Look & Feel combinations are not really acceptable.

To get the best display on a Window system use:

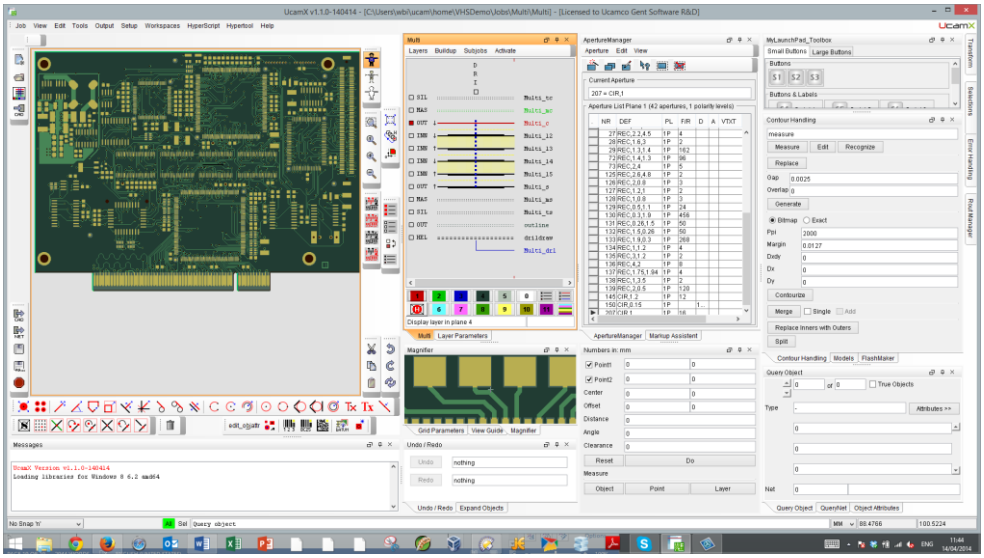
- Eclipse/Windows



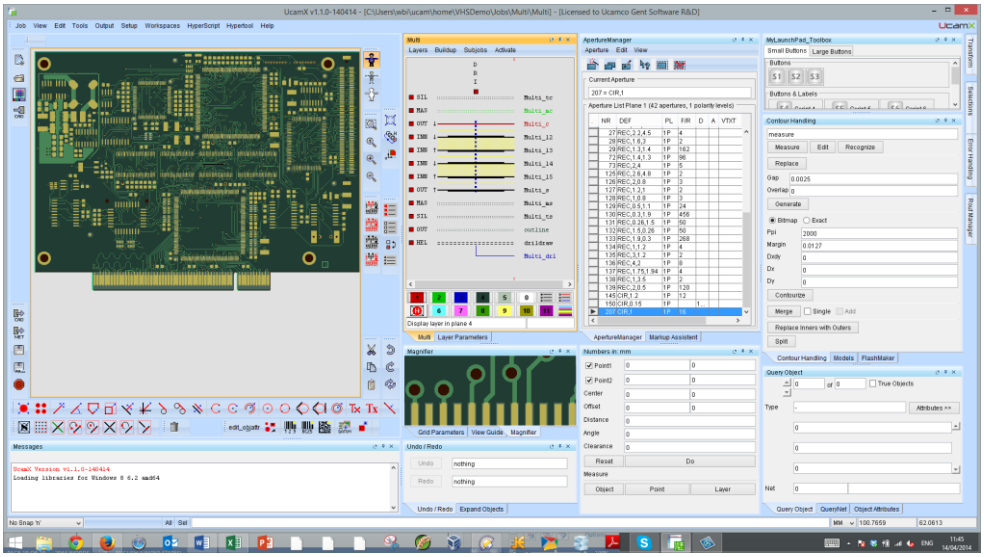
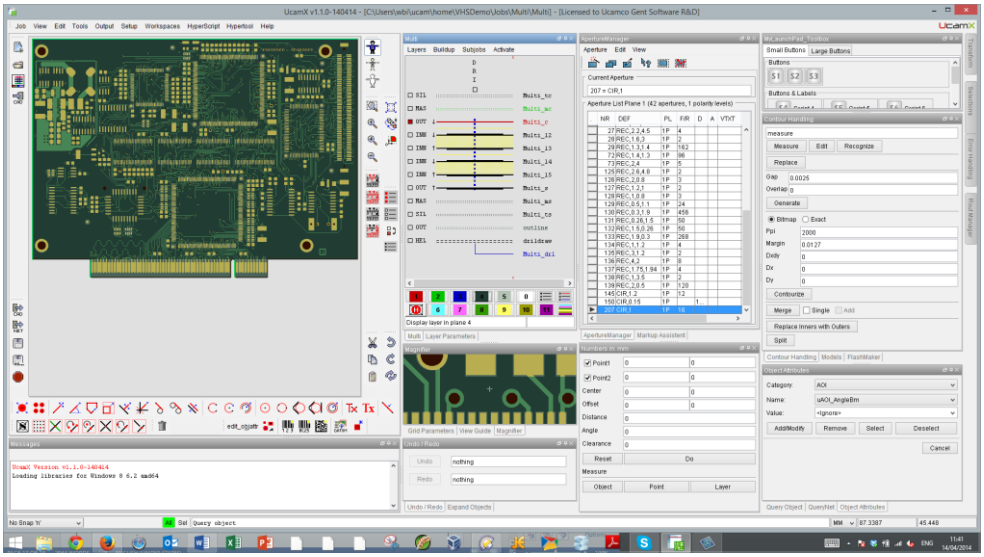
- Eclipse3X/Windows



- Office2003/Windows



- Office2007/Windows



- Xerto/Windows (Default)