



Beginner's Guide for Starter Edition

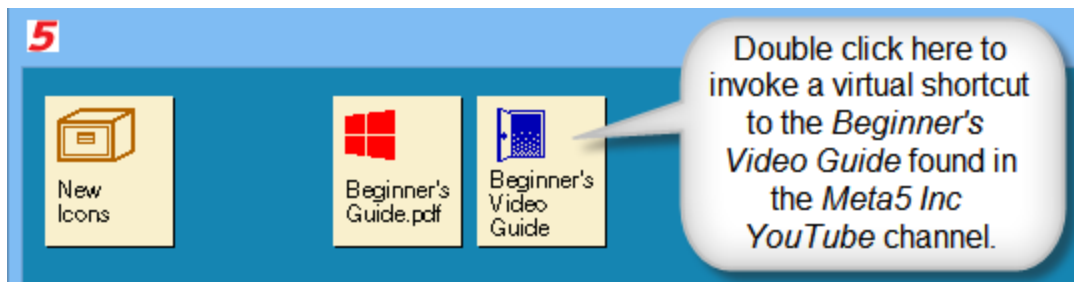
V4.3

First Edition September, 2015

Introducing Meta5 *Starter Edition*

[Click for Video – Beginner's Video Guide](#)

VIDEO NOTE: A video of this Beginner's Guide can be found on your Meta5 desktop, or the link above in this document, and is called [Beginner's Video Guide](#). To watch this video, simply double-click it to invoke a virtual shortcut found on the Meta5 Inc YouTube channel.

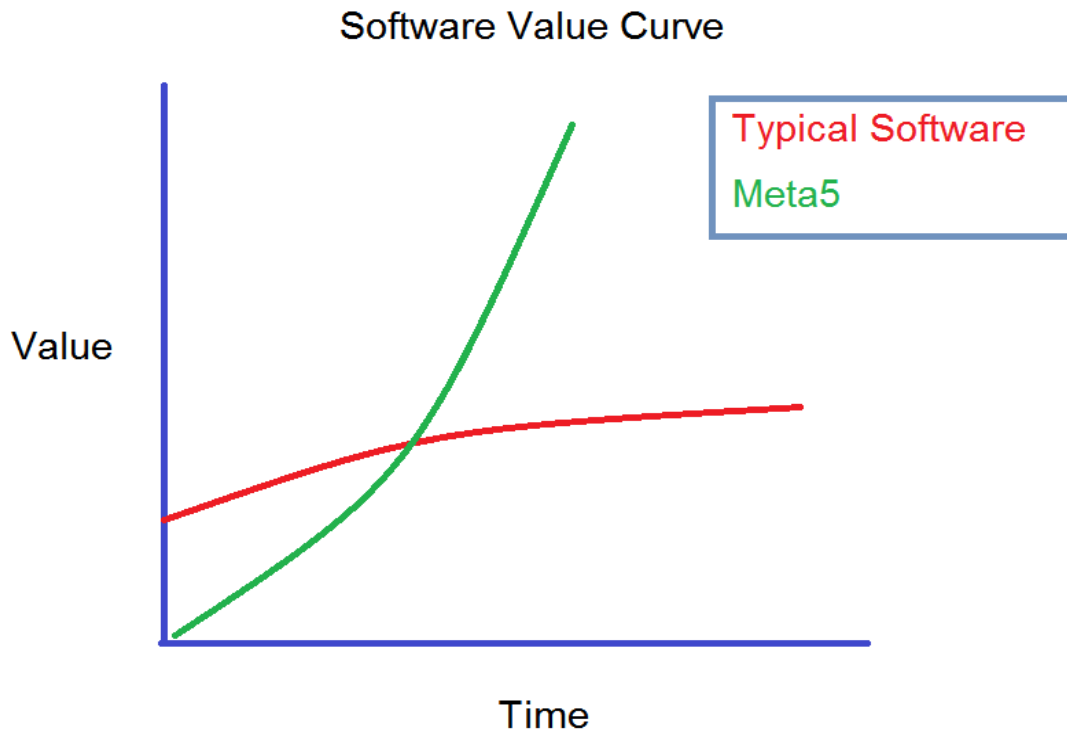


Hi and welcome to Meta5! Meta5 is unlike any software you have ever used. Our software doesn't fit into the standard Windows look and feel. It has been designed from the ground up to take advantage of our unique integration and automation technology not found in Windows. Simply put, we believe in a better way. We know that after spending some time with Meta5, you will feel the same way too.

As you navigate within Meta5, you may reflect back on the experience you had when you first learned a new device like an iPad, iPhone or Android tablet. In the beginning it was awkward, but you soon realized the unique power of your new device. So, just like an iPad, the first time you use it, it will feel a bit awkward, but then after a while, it will all come together. So sit back and enjoy the fun in learning the most powerful and flexible automation analysis tool ever built. We encourage you to read this guide and try the interactive steps as they are explained to you. If you prefer, you can watch a video presentation of the examples in this guide. Once you understand how Meta5 works, you will have the power of a Computer programmer without the need to write computer code. You will find the work that previously took you hours or days, now only takes minutes.

This guide will introduce you to Meta5, the interface, and how to navigate within it. It will also guide you through some step by step exercises to give you a basic understanding of the power behind Meta5. Finally, this guide will show you where to obtain additional information to grow and expand your knowledge of Meta5.

In the beginning it may seem a bit frustrating as you learn the "new" Meta5 way, but give it some time and you will soon begin to see the power you have in front of you.



Most software has a very predictable *Time vs Value* curve. At first, most software looks intriguing and seems great initially. But soon you realize that the software doesn't meet or fit your particular needs and you run into roadblocks. You once again, get frustrated and either try writing some computer code or try yet again, another piece of software. Most software fails because it has two different audiences it's trying to cater to. First, it needs to be easy to use, and second, it needs to have a lot of features to get things done. These two needs conflict each other and very few software applications can address both of these needs well.

Meta5's *Time vs Value* curve is different. At first it might be a bit difficult getting used to the "new way", but after some time you will begin to see the unique power and flexibility of our tool and realize how you can create almost any type of integration and automation application you can imagine. Meta5's approach is to modularize the software experience. We create simple stand-alone tools that are easy to learn and perform a specific function. Then by connecting these tools/icons together you create new functions or software applications called Capsules. Using Capsules instead of writing computer code allows the non-programming data analyst to create customized sophisticated data analysis applications that were typically reserved for computer programmers. Meta5 breaks the dependency of computer code and enables anyone to develop unique customized data driven applications using Meta5 Capsules.

Objectives of this Guide

When you have finished this guide, you will be able to:

- Start and Stop Meta5.
- Understand the parts of the Meta5 window.
- Navigate the Meta5 Desktop.
- Copy, Move, Delete, Rename, Open and Close Meta5 Icons.
- Find and create your own Meta5 Icon files.
- Configure your own query tool that uses a 32-bit ODBC data source.
- Copy files (using drag and drop) between Meta5 and your PC and know how to copy documents between Meta5 and your PC using Meta5's *PC Directory* icon.
- Understand the basics of how to use Excel within Meta5.
- Create simple Meta5 Capsule applications.
- Configure Meta5 email using your SMTP email server.
- Send internet email and attachments using Meta5 Capsule applications.
- Run finished Meta5 Capsule applications.
- Set and use @Variables in a Meta5 Capsule application.
- Create Meta5 Capsule applications that run again and again using a list of parameters with Meta5's unique iteration capability.
- Find more information about Meta5 including where to find;
 - Meta5 Manuals and Documentation
 - Different types of finished Capsules applications (Learn by example)
 - Meta5 Instructional Video's
 - Meta5 Self-Paced Tutorials
 - Virtual Classroom Training

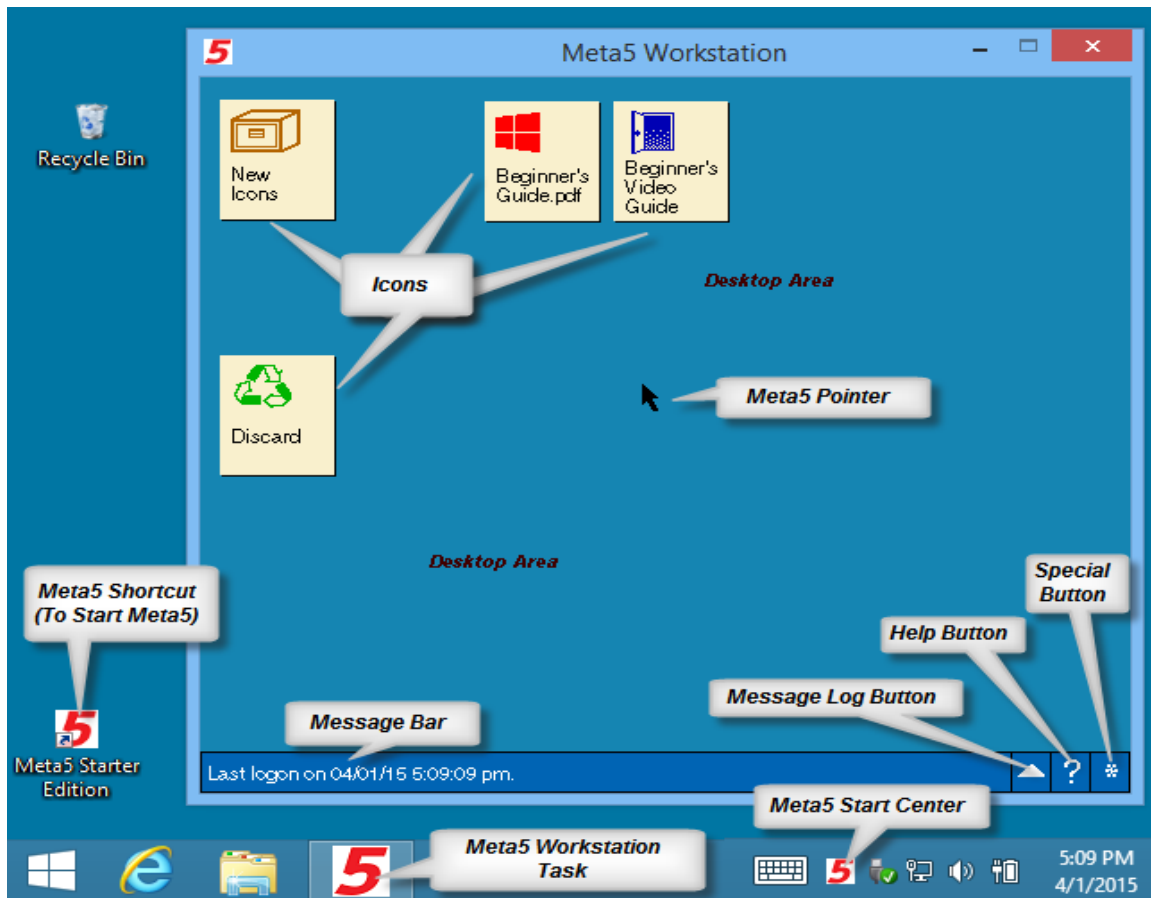
Starting and Stopping Meta5

[Click for Video - Start/Stop and the Meta5 Environment](#)

To start Meta5, double-click the Meta5 Shortcut on your MS Windows Desktop. After a few moments, the Meta5 Start Center (white icon) will appear in the lower right corner (the Notification Area) of your Windows desktop and the Meta5 Workstation will start. Your Meta5 environment will look similar to the example shown below. To stop Meta5, simply close the Meta5 application in Windows.

The Meta5 Environment

The screen space occupied by the Meta5 desktop application is what you will use to work, store, create and manage your Meta5 Icons. This is also known as the *Meta5 Workstation Desktop*. Below are the parts of your desktop, which include: *Icons, Pointer, Message Bar, Message Log Button, Help Button, and Special Button*. Also notice the *Meta5 Start Center, Meta5 Starter Edition* shortcut and the *Meta5 Workstation Task* on the Microsoft Windows Desktop.



The Meta5 Desktop

The *Message Bar* is the narrow, rectangular area along the bottom of your Meta5 desktop where status and error messages are displayed.

The *Message Log Button* is the triangle in the lower right corner of your Meta5 desktop. This button opens the Message Log window, which displays current and previous messages.

The *Help Button* is the question mark in the lower right corner of your Meta5 desktop and opens our documentation. From here you can find or search on any topic about Meta5. NOTE: Pressing *F1* is another way of invoking *Help*.

The *Special Button* is the asterisk in the lower right corner of your Meta5 desktop. This button opens a menu of choices for performing system tasks like setting preferences within the Meta5 desktop. For more information, refer to *Help* and search for “*Special Button*” or the *Meta5 Getting Started Manual*.

The *Meta5 Shortcut* is one of the ways to start your Meta5 desktop application. You can also start Meta5 just like you would any other Windows program by using the Windows Start icon.

The *Meta5 Start Center* appears in your *Notification Area Icons* (the lower right hand corner of your Windows desktop) after invoking Meta5. The *Meta5 Start Center* allows you to start and stop your Meta5 desktop in various ways and to configure various aspects of Meta5 including but not limited to configuring email and the screen size of your Meta5 desktop. For more information, refer to *Help* and search for “*Meta5 Start Center*”.

The **Icons** that can be used in Meta5 Capsule application building represent various functions that generally fall into one of the following categories:

- Tool Icons
These icons are tools that run only within the Meta5 desktop. For example, some icons represent tools for creating documents (such as the *Text* icon) and other icons represent tools for retrieving data (such as the *Query* and *SQL Entry* icons).
- Transformer Icons
These icons are functions that transform tabular sets of data. They can transform data by aggregating and combine data, converting and filtering data, prepping data for entry into another database, and performing statistical analysis on data. These type of functions are well commonly known as extract, transform and load (ETL).

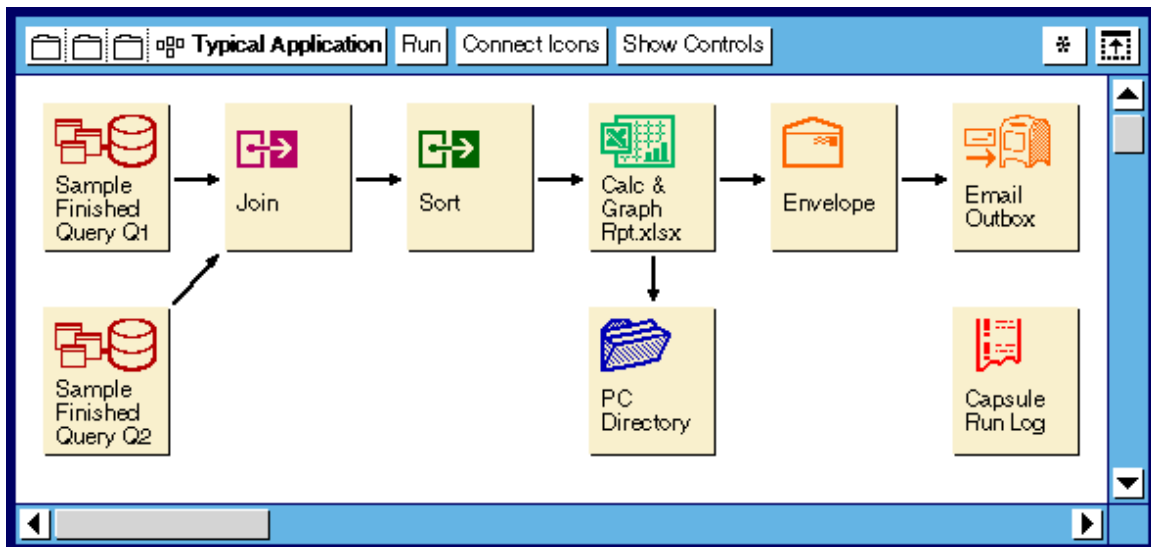
- Container Icons
These icons can be used to hold other icons. Examples are *Folder*, *File Drawer*, *Envelope*, *Discard* and *Capsule* icons.
- Service Icons
These icons are tools that provide a service such as the *Email Outbox* (used to send email and their attachments to the internet)
- PC Integration Icons
These icons Integrate functionality between Meta5 and MS Windows. Some icons transfer files, such as the *PC Directory* Icon, while other icons such as the *PC Application* Icon, *iExcel*, *iWord*, *iDir*, and *iWeb* launch and control your very own windows based applications from within Meta5.
- PC Based Icons
These are icon files that are stored within the Meta5 system. When they are launched in interactive mode, these icons behave like they normally do in MS Windows, but when they are part of a Capsule application; they interact with other Meta5 Icons. Our *Excel Spreadsheet* and *Word Document* Icons allow us to utilize MS Excel and MS Word in extremely powerful and unique ways that have been never realized by any other software.
- Capsule Icons
The *Capsule* icon is the heart and soul of the Meta5 system. It is the tool that you use to create Meta5 Capsule applications. You create a Meta5 Capsule by connecting icons together in order to automate specific functions like cutting and pasting that typically are manually intensive. The basic functions of a Capsule are to retrieve, organize and cleanse data, then analyze and aggregate the data, and finally present and distribute the data. These are tasks business professionals do time and time again in order to create new insights with their data. This is normally a very technical and time consuming process that is unique to any individual job. Now these tasks can be automated simply by using a Meta5 Capsule. Using Meta5 will enable anyone within your organization to become a data expert in no time without ever writing any computer code.

NOTE: You should always have a copy of the *New Icons* File Drawer and *Discard* container on your desktop. *New Icons* contains all Meta5 icons that you can copy and *Discard* is the way of recovering from mistakes. It is also recommended that you keep the PDF version of this manual on your desktop for quick reference on Meta5 functionality.

Creating Applications Using Meta5 Icons (Tools)

You can use Meta5 tools independently or as integrated sets of tools in a Capsule application. Each tool is designed to be specific and simple to use. You can open each tool, build within that tool and set its parameters.

The power of Meta5 is realized when tools are integrated and connected in a Capsule to build a more elaborate, unique and sophisticated application. You can build very simple or complicated applications that automatically perform the task(s) you want. For example, you can create an application that selects and retrieves information from a database, joins the information from another query or database, sorts the data, calculates the data, creates an Excel Report and Graph, and finally emails the report or writes it out to a network drive. See the figure below.



A Typical Meta5 Capsule Application

Once a Capsule is created it can be run over and over again using different parameters or can be set up to automatically run or “iterate” through a set of values.

Information on how to create Meta5 Capsule applications and where to find material to learn more about Capsules will be provided later on in this guide.

Navigating within Meta5

[Click for Video – Navigating within Meta5](#)

Just like with Microsoft Windows, using the mouse, touching the screen or keyboard can be used to navigate within your Meta5 desktop. Click the mouse or touch the screen to [SELECT] an icon, menu item, section of text, or other object that you want to use. The concept of [SELECT]ing something, or highlighting it, or clicking it, is important to note when using Meta5 as you first need to [SELECT] or highlight or click something before you can work with it and make any changes or modifications to an icon or item you want.

To [SELECT] an icon, in order to start using it

- Left click to [SELECT] and highlight icons, menu choices, control buttons and text. To take any action within Meta5, it must first be [SELECT]ed.

To [DESELECT] our unselect an icon

- Left click on an empty spot on your Meta5 desktop and the highlighted icon will no longer be highlighted.

To [EXTEND] your selection in order to work on more than one icon at time

- [SELECT] (left click) on the first icon. The icon remains highlighted.
- Right click on every other icon you want to [EXTEND] your selection. They too will become highlighted.

More on Navigation

With Meta5, the first action to take is to [SELECT] an icon or something that you want to work with. That's easy, just use the left mouse button, or if using a Touch screen, touch it. The next thing you should do is determine what you want to do with the [SELECT]ed icon. Possible answers are; I want to; open it, copy it, move it, delete it, or to see and change the properties or options of it. Finally, you may ask yourself, how do you invoke the Open, Copy, Move, Delete or Options choices? We will address that next.

NOTE: Many beginner Meta5 users will [SELECT] or click something then inadvertently click something else, thereby [DESELECT]ing the original icon they intended on working with. Be sure to [SELECT] and then the next immediate function should pertain to the icon or item you selected. Be very aware of [SELECT]ing and [DESELECT]ing as you navigate within Meta5.

Working with Icon Files (Copy, Move, Options, Delete)

To work with icon file(s) you must first [SELECT] or highlight the item you want to work with, then press the corresponding keys on your keyboard to invoke the desired function

To [**COPY**] an Icon:

- [SELECT] the icon by clicking it (make sure the icon remains highlighted). Press *Ctrl-C* [COPY], now move your mouse to the location of where you want the new copy of the file to be located and left click.
- Or [SELECT] the icon by clicking it (make sure the icon remains highlighted). Press and hold the *Ctrl* key, now click and drag the icon to the location of the new icon.

To [**MOVE**] an Icon:

- [SELECT] the icon by clicking it (make sure the icon remains highlighted). Press *Ctrl-X* [MOVE], now move your mouse to the location of where you want the icon to be moved and left click.
- Or [SELECT] the icon by clicking it once (make sure the icon remains highlighted). Keep the mouse button pressed; now drag your mouse to the location of where you want to move the file.

To [**OPTION**] an Icon in order to change its properties (such as renaming)

- [SELECT] the icon by clicking it (make sure the icon remains highlighted). Press *F4* or *ALT-ENTER* to invoke [OPTIONS], now an Options window will open, from here you can change the name and color of an icon as well as change other parameters that are specific to each icon. More on this later...

To [**DELETE**] an Icon:

- [SELECT] the icon by clicking it (make sure the icon remains highlighted). Press the *Delete* key [DELETE] on your keyboard.

NOTE: Deleted icons will be moved to the *Discard* folder. The deleted icons can be retrieved from the Discard folder by copying or moving the icons back onto your desktop. When an icon is closed, the original version is placed in the Discard folder. When you shut down the Meta5 application the Discard folder is emptied.

NOTE: You will often see the use of [COPY],[MOVE],[OPTIONS] and [DELETE] referenced within our documentation instead of explicitly citing the keyboard shortcuts mentioned above, that's because there are many ways to invoke these commands such as the *Meta5 pop-up Function Pad*, Touch Gestures and Function keys (F1-F5). Documentation on other ways of invoking these commands can be found in the *Meta5 Getting Started Manual* or in the Appendix of this manual.

Working with Icon Files (Open, Close, Rename)

To **Open** an Icon:

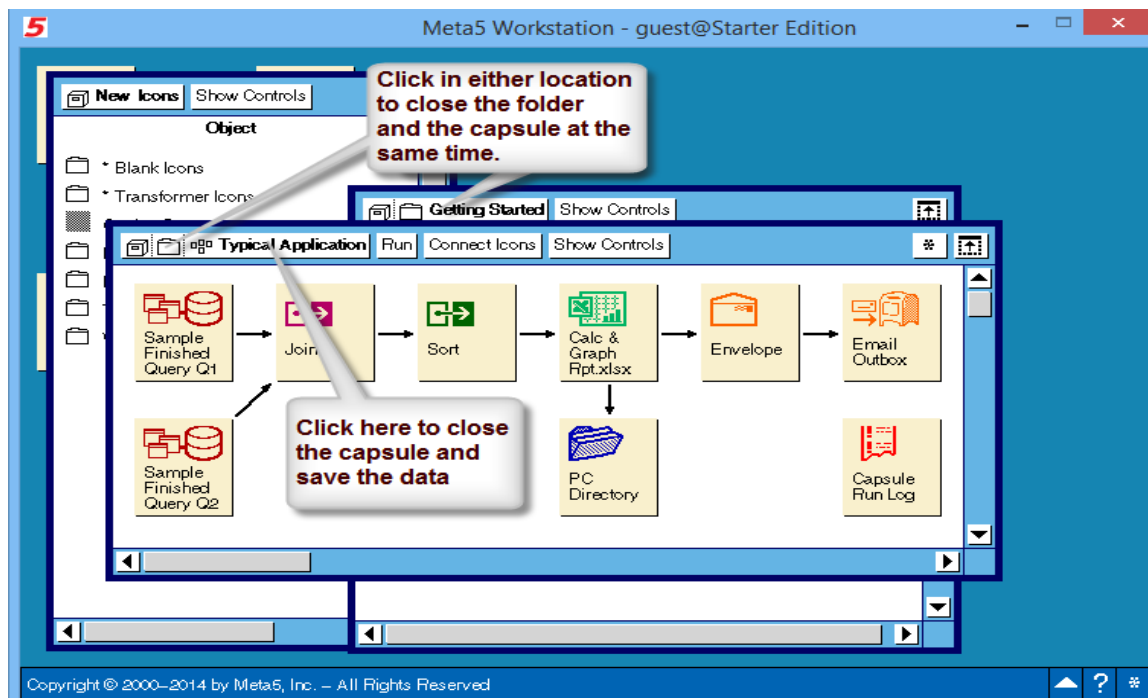
- Click or touch the icon twice.

To **Close** an Icon;

- Click on the name of the icon in the upper left corner of the icons' window. This also saves the icon.

Some icons can be enclosed (or “nested”) inside one another. If nested icons are open. Each level is shown in the title block. Click the left-most icon in the header to close all icons. Click the right-most icon to close the last icon opened.

NOTE: Some icons can't be changed, moved or deleted based upon how the security is setup by the administrator. (i.e. such as in the example below)



***NOTE:** When you close an icon that you have been working with its changes are automatically saved just by closing it. Whenever an icon is closed (*thereby being saved*), a copy of the previous version of that icon (without changes) is placed in the *Discard* container so that it can be restored if you want to keep the original.

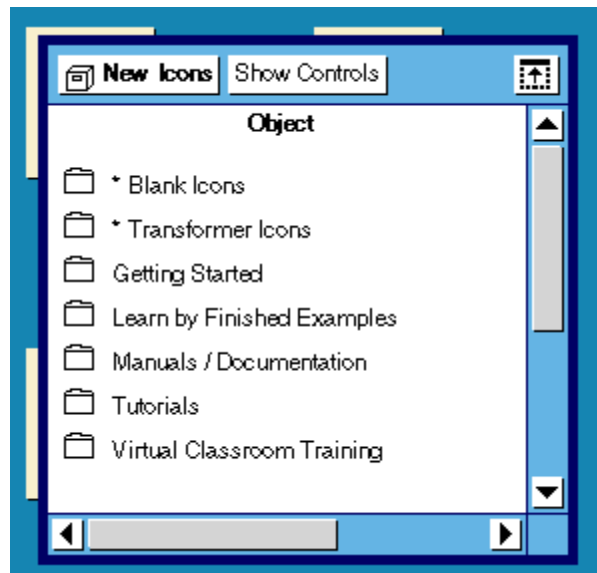
It is important to note that *there is no **SAVE** or **UNDO*** command. *SAVE* is accomplished and implied when you close the icon. You can *UNDO* the *CLOSE/SAVE* by getting the prior copy of that icon in the *Discard* folder as it always keeps the prior version of the icon you are working with.

To **Rename** an Icon:

- [SELECT] the icon by clicking it (make sure the icon remains highlighted). Next, press *F4* or *ATL-ENTER* [OPTIONS] on your keyboard. Notice the name of the icon is highlighted. Type in your new name.

Understanding *New Icons*

Most of everything you will ever need can be found in the *New Icons* file drawer located in the upper left corner of your desktop. When you open the *New Icons* file drawer it will look something like this.



Finding and creating your own Icon Files

In Meta5 you don't really create a new file or icon, instead you make a copy of an icon located in the *New Icons* file drawer. This file drawer is located in the top left corner of your desktop.

To create a new, icon, double click *New Icons* file drawer and then double click the **Blank Icons* folder. You can copy any one of these icons by using the copy techniques described above. Try to copy a Capsule Icon now by following the instructions below.

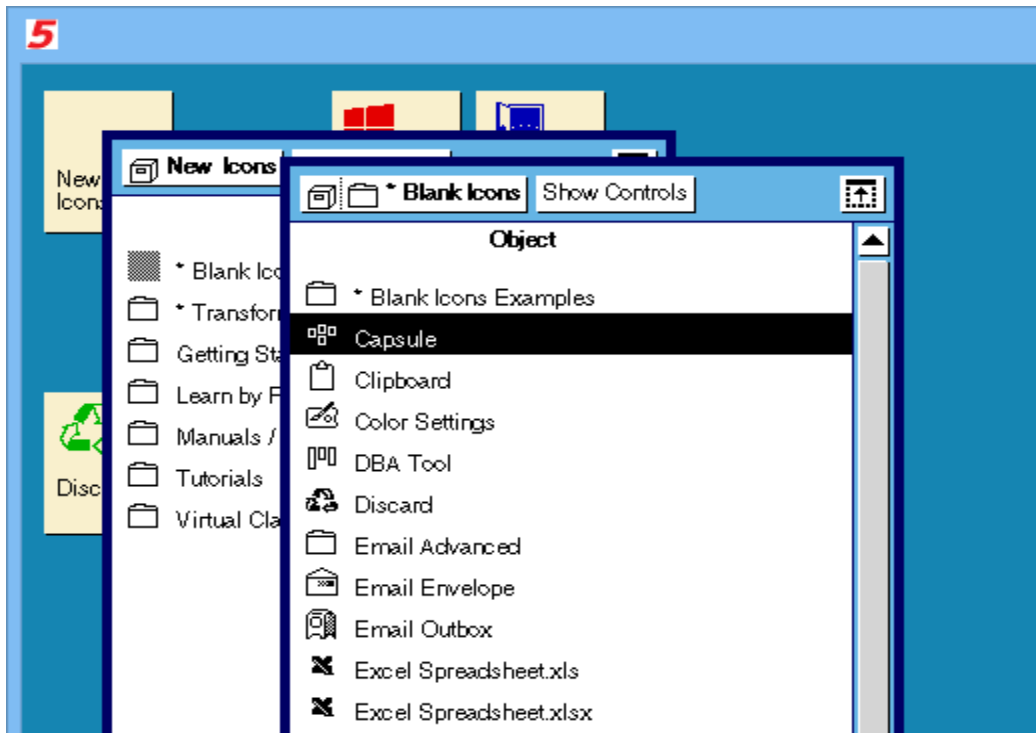
To copy a *Capsule* icon:

Open the *New Icons* file drawer by double clicking it. Then open the **Blank Icons* folder by double clicking it, next [SELECT] the *Capsule* icon then press *Ctrl-C* [COPY] and move your mouse to the desired location and click.

To delete your new *Capsule* icon:

[SELECT] the newly copied *Capsule* icon on your desktop by clicking it once. Next press the *Delete* key on your keyboard.

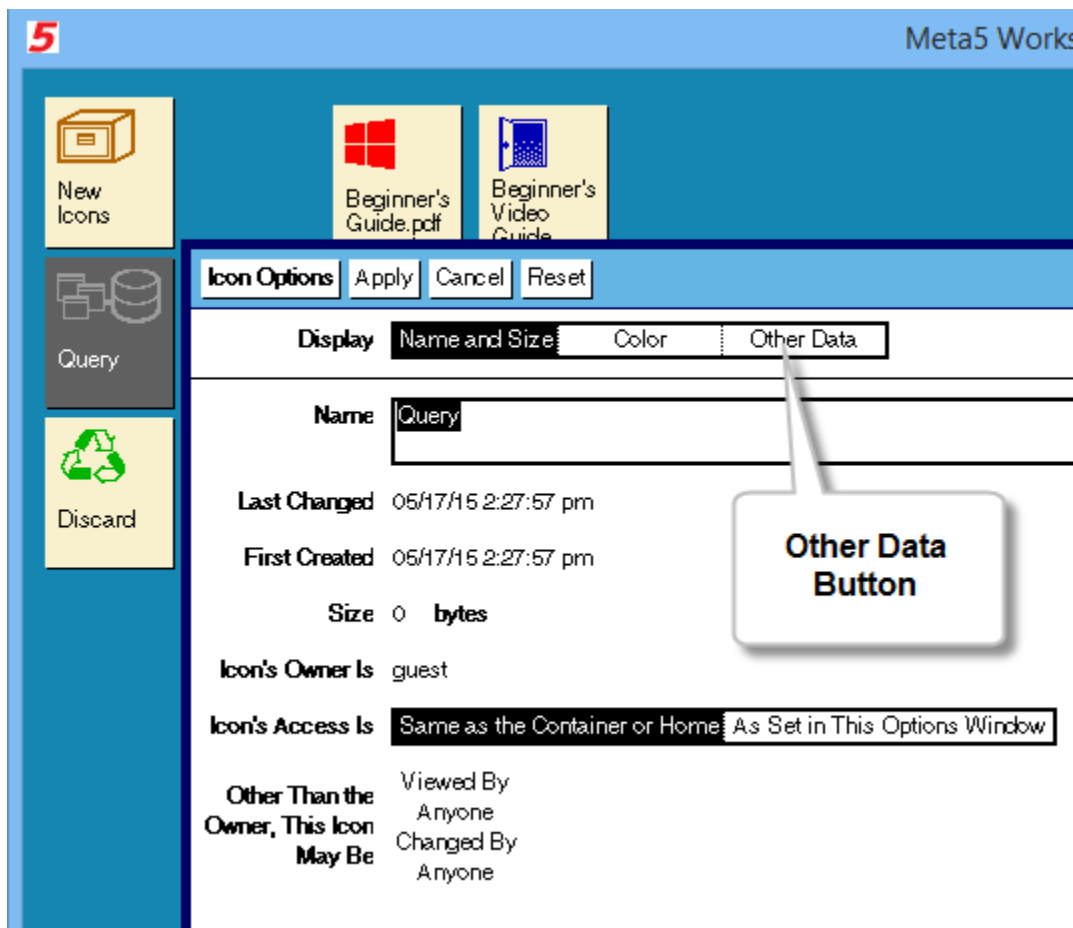
NOTE: We describe the function of the other folders located within *New Icons* later on in this guide.



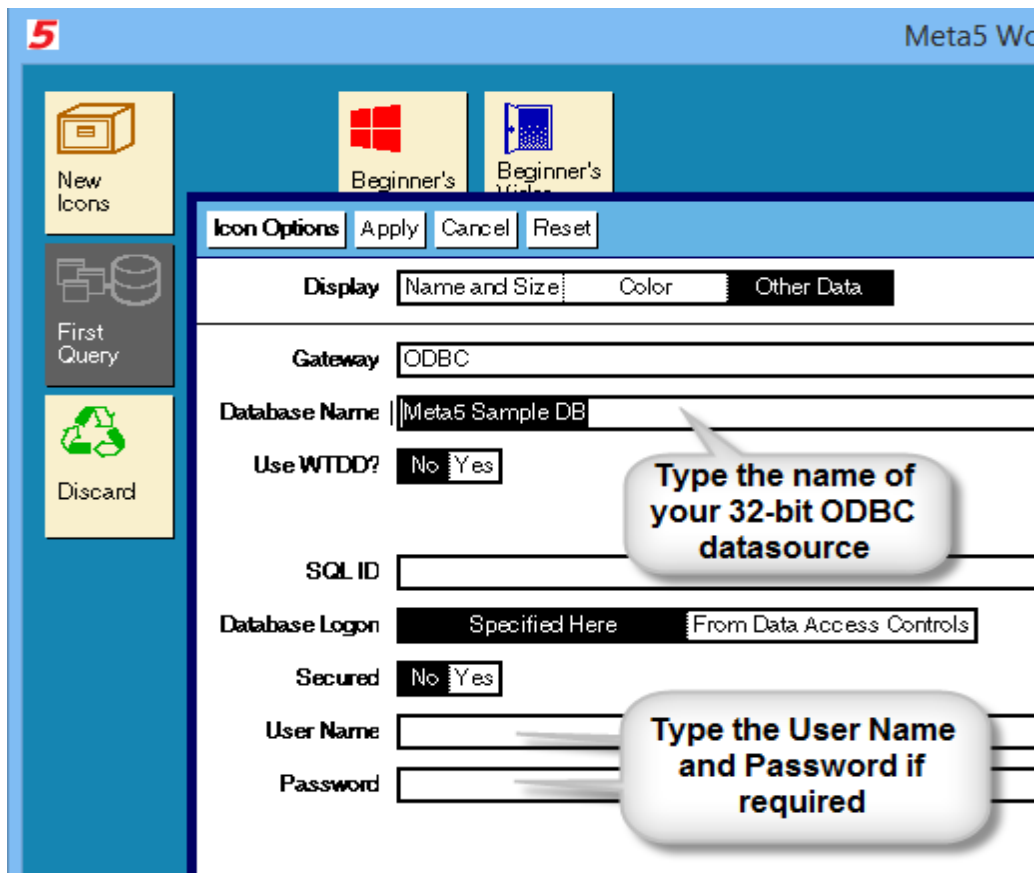
Finding and creating your own Query Icon

[Click for Video – The Basics of the Query Tool](#)

The *Query* icon is one of Meta5's data access tools. To create a new *Query* icon, open *New Icons*, file drawer then the **Blank Icons* folder. Click on the *Query* icon inside the **Blank Icons* folder and [COPY] it to your desktop. Once the *Query* Icon is copied to your desktop it needs to be configured to know which database to access. It may also require a user id and password depending on what type of database you are connecting to. To configure the *Query* Icon, [SELECT] it and [OPTION] it (remember *OPTION* is *F4* or *ALT-ENTER* on your keyboard). You should see the Icon Options window like the one below. Since the Name *Query* is highlighted you can now type another name for your query. Rename it now to *First Query* in the *Name* box.



Next select the *Other Data* button to configure the query to your database.

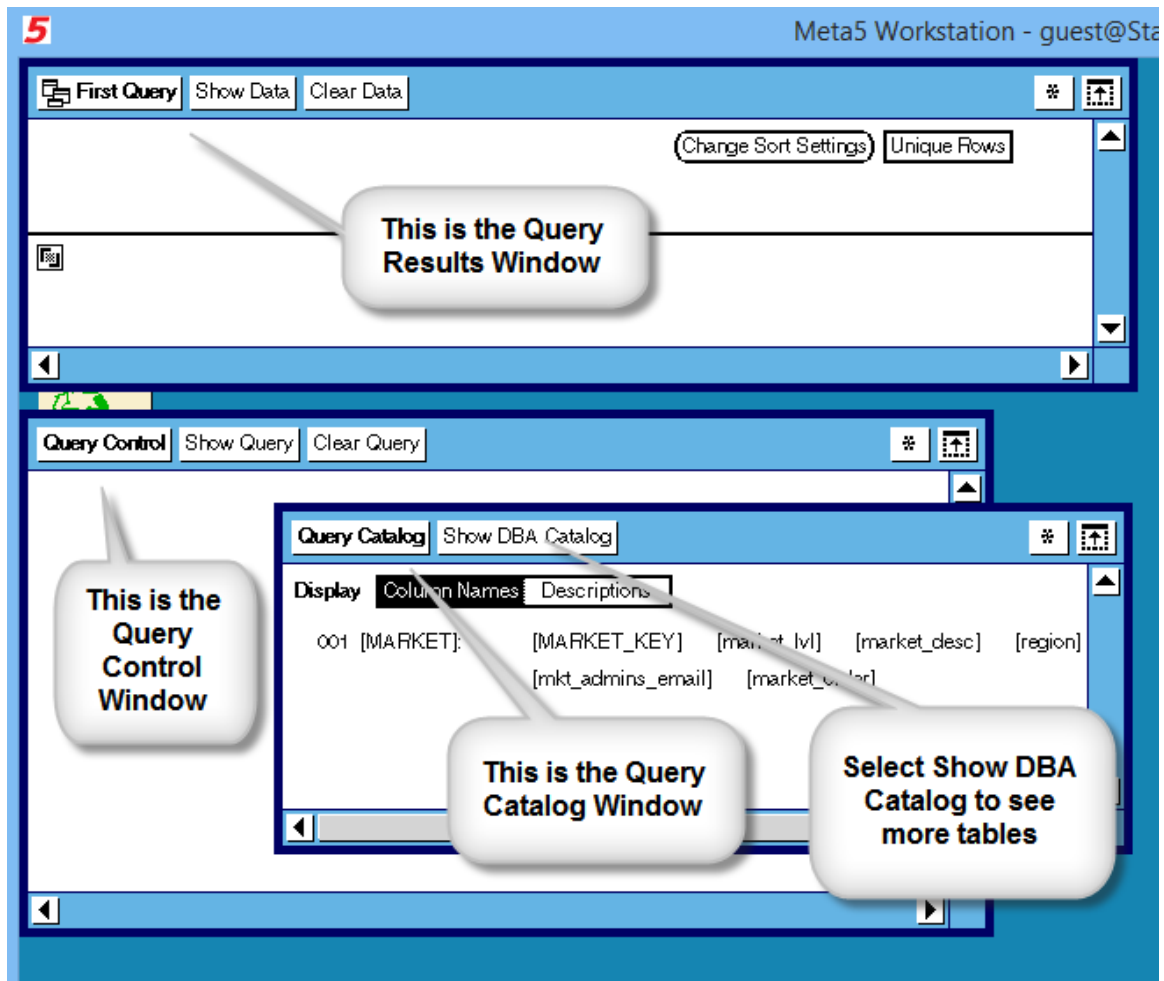


To configure the *Query* icon to your database you must first have a 32-bit ODBC data source created on your PC. For convenience we have created a *Meta5 Sample DB* 32-bit ODBC data source pointing to a MS Access database in the Meta5 installation directory *Meta5\db* called *Meta5 Sample DB*. Use this data source for your First Query.

Once your 32-bit ODBC data source is created type it in the *Database Name* field. If the data source requires a *User Name* and *Password*, type it in those fields. Now close the Icon Options window and open your query icon by double clicking it to make a live connection to the data source.

NOTE: *Gateway*, *Use WTDD?*, *SQL ID*, *Database Logon* and *Secured* sections of the Query tool Options are covered in the *Query Tool* manual. For more information and detailed explanation of the *Query Tool* refer to that manual. To create additional 32-bit ODBC data sources please contact your system administrator or refer to our *Query Tool* manual for more information. You can also Google *creating 32-bit ODBC data sources in windows* for more information.

Opening a new Query Icon for the first time.



When you open a query for the first time three windows will display:

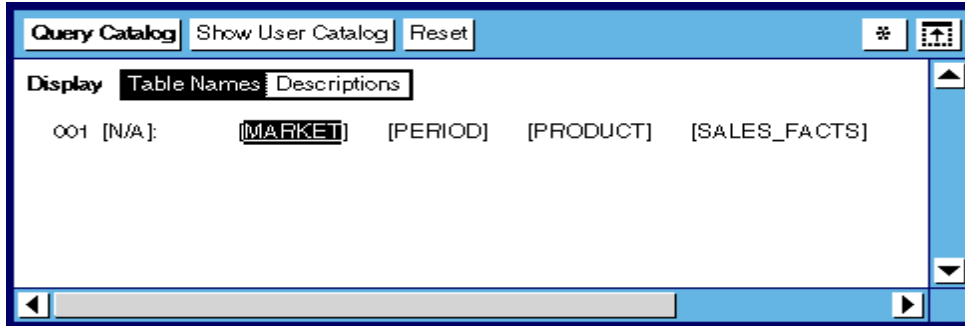
The Query Results window. This is where the columns and data of the query will appear.

The Query Control window. This is where the graphical depiction of your query will be stored and where constraints and joins are defined.

The Query Catalog window. This window has two modes the *User Catalog* (shown) and the *DBA Catalog*. The *User Catalog* will show you the specific tables being used in your query. The *DBA Catalog* will show you all of the tables in your database. You must [SELECT] the tables from the DBA Catalog and bring them into the User Catalog in order to use them in the query tool.

Now click 'Show DBA' Catalog to see the tables in your database.

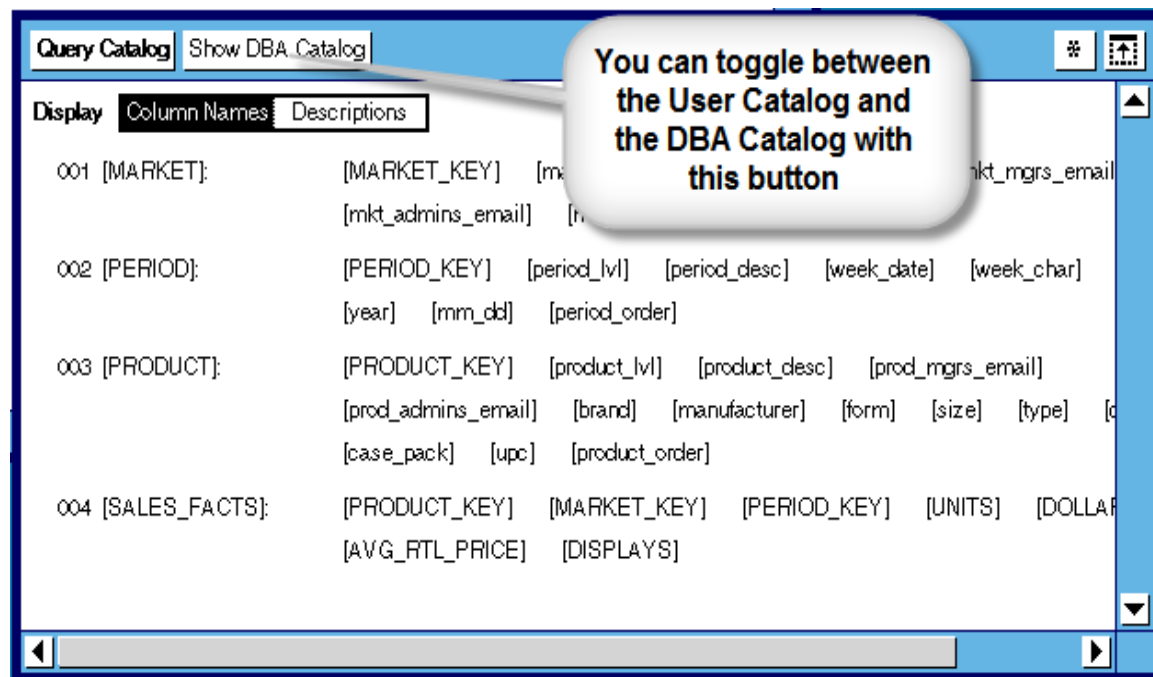
Query Catalog / DBA Catalog mode




NOTE: When you are in the *DBA Catalog* mode the **Show User Catalog** button appears as above, When you are in the *User Catalog* mode the **Show DBA Catalog** button appears as below.

To bring the tables from the *DBA Catalog* into the *User Catalog* for use in your query, [SELECT] and [EXTEND] your selection to the tables you want, now while the tables are highlighted click on the *Show User Catalog* button to bring them to the *User Catalog*.

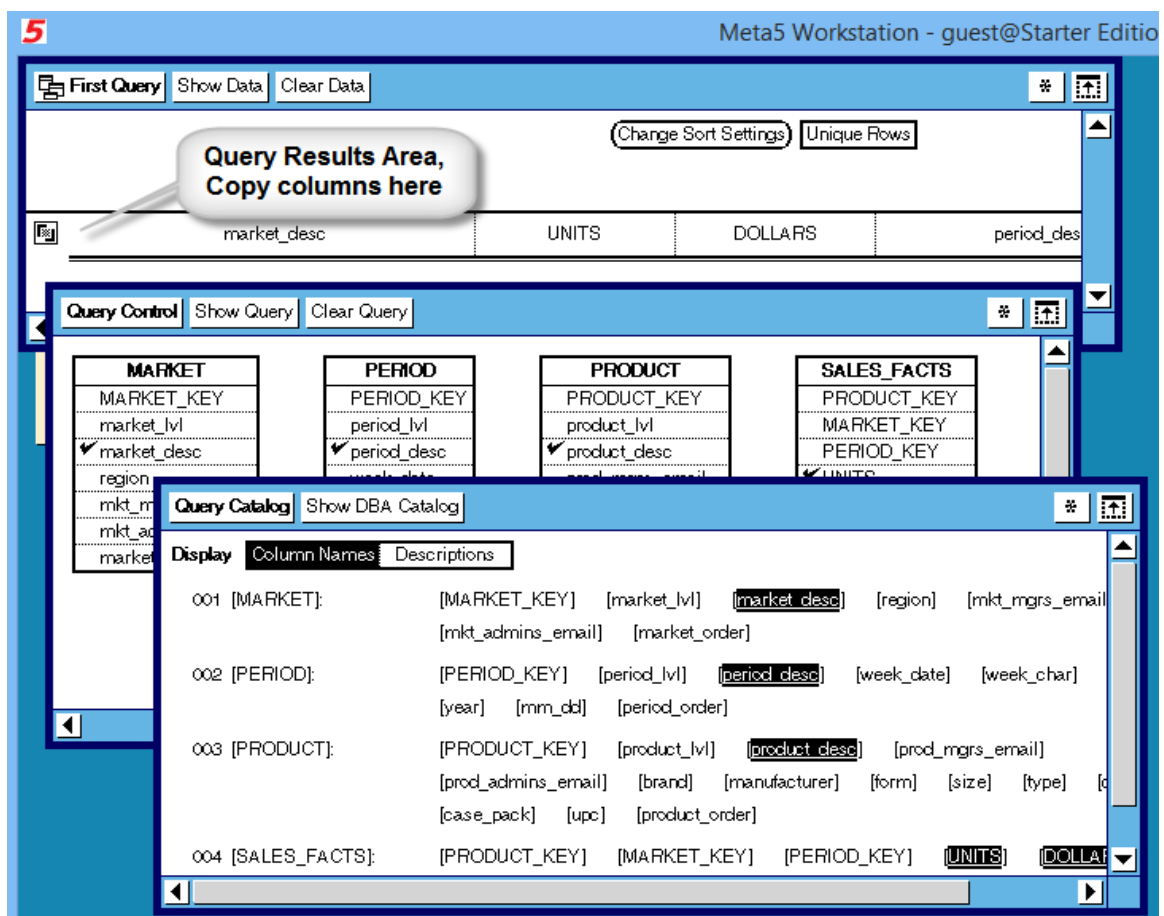
Query Catalog / User Catalog mode



Once you have retrieved the tables from your database into the *User Catalog* you now can [SELECT] the first field/column you want to use and [EXTEND] your selection for additional fields/column. Once you have [SELECT]ed all desired fields/columns, [COPY] them to the body of the Query Results window where the select all button  is located.

If you want to delete a field/column from the *Results Area*, just [SELECT] it and [DELETE] it.

To add another column in the *Results Area*, [SELECT] the column to add from the *Query Control* or the *Query Catalog/User Catalog* mode window, then [COPY] it and click on a column in the *Results area*, it will be placed to the right of that column.



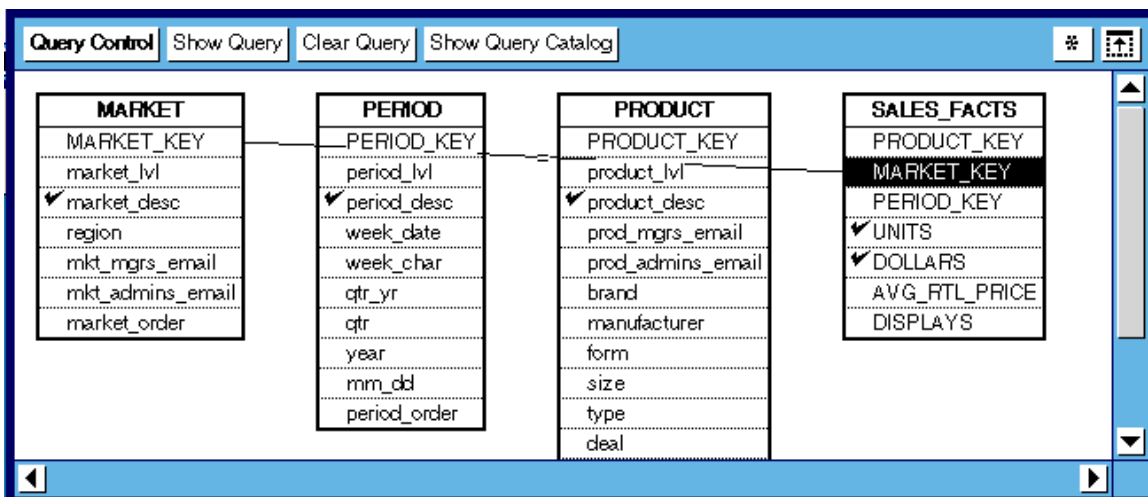
This picture shows the columns from the query catalog after being copied to the *Results Area* of the query. It also shows a graphical depiction of the tables in the *Query Control* window. The query tool is made up of all three windows. Using these windows together is how you construct and change a query.

Setting Joins on Queries.

When you open a *Query Icon* for the first time, no joins are set. To set the joins and constraints you use the *Query Control* window of the *Query Icon*. Pictured Below;

The graphical depiction shows the table names in **BOLD** and the fields/columns that belong to the table below the table name.

To create a join, [SELECT] (left mouse click) the first column of the first table i.e. MARKET_KEY in the MARKET table and [EXTEND] (right mouse click) your selection to the second table i.e. MARKET_KEY in the SALES_FACTS table.



Once you create the join you will see a line connecting the columns that you joined. If you make a mistake and want to delete a join just click on the join line and [DELETE] the join.

Now, continue making all the necessary joins for the query. They are;

Already Done

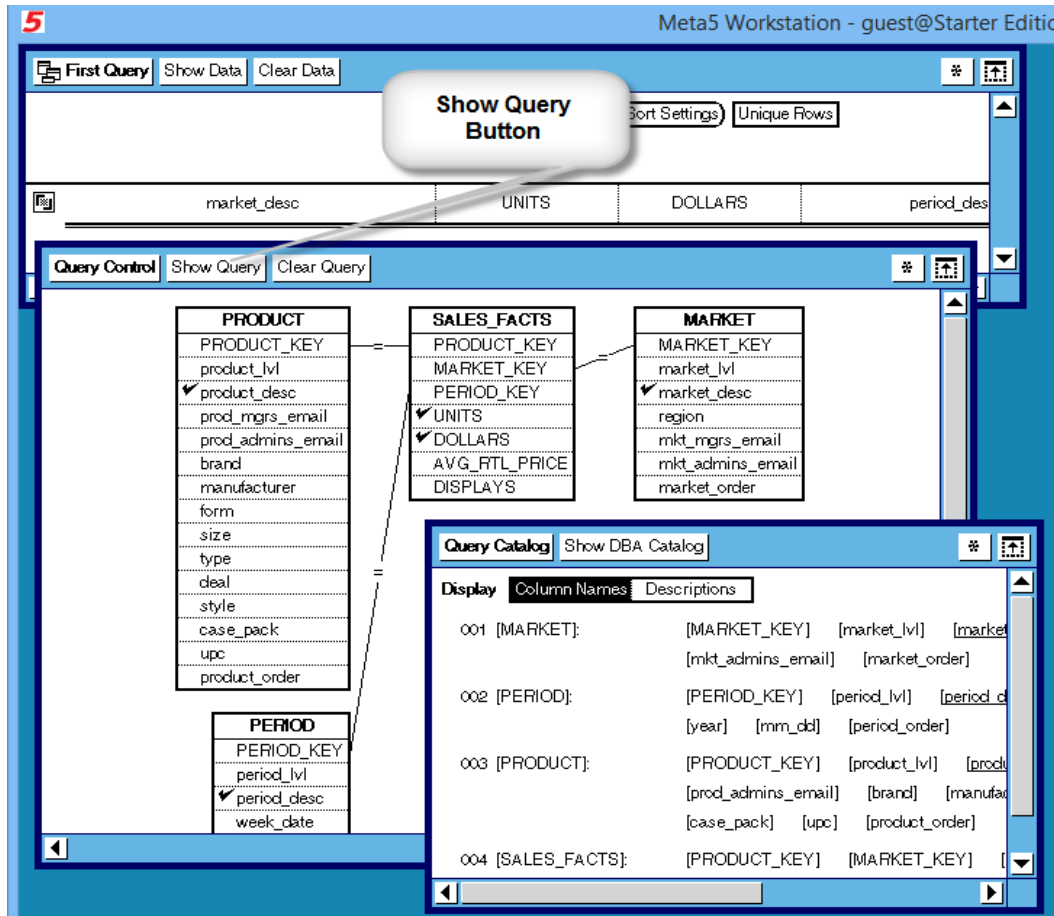
MARKET_KEY.MARKET to MARKET_KEY.SALES_FACTS

Create These

PERIOD_KEY.PERIOD to PERIOD_KEY.SALES_FACTS.

PRODUCT_KEY.PRODUCT to PRODUCT_KEY.PRODUCT.

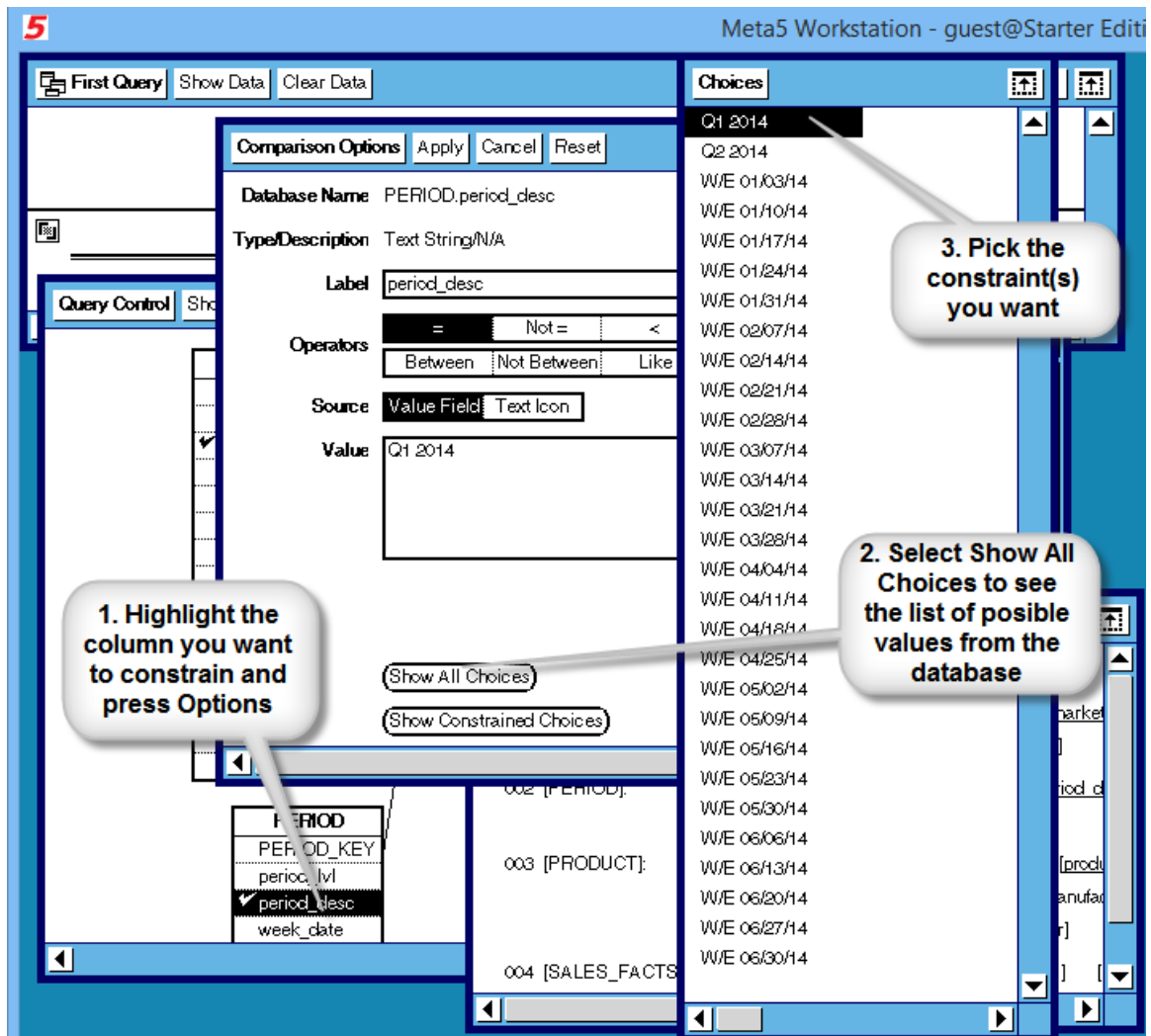
Once the joins are completed select the *Show Query Button* to see the tables automatically arrange themselves as the graphical depiction is show below.



Setting Constraints on Queries.

To set a constraint or limit on any column, follow the steps below;

1. [SELECT] the column you want to constraint in the *Query Control* window, and [OPTION] (*F4* or *Alt-Enter*) it.
2. Click the *Show All Choices* button to see the list of possible values from the column in the database. NOTE: it sends a select distinct SQL command to the database to determine the unique valid choices.
3. Next [SELECT] the constraints you wish to apply to the query. To choose multiple constraints [SELECT] (left mouse click) the first one and [EXTEND] (right mouse click) the other choices.



Setting Constraints on Queries (Continued)

Continue setting constraints as described below;

1. **period_desc.PERIOD** column **Q1 2014** Value (already done)
2. **region.MARKET** column **Central** Value
3. **product_lvl.PRODUCT** column **Brand** Value
4. **product_desc.PRODUCT** column **Total Napa** Value

NOTE: While setting the **product_desc** column constraint use the *Show Constrained Choices* instead of *Show All Choices* button to display the choices. The *Show Constrained Choices* will limit the **product_desc** to the products that are at the **Brand product_lvl** as set in Step 3 above. i.e. it will send a *select distinct product_desc where product_lvl = 'Brand'*

To Add Additional columns to the query - To add additional columns to the query, select any column from the *Query Control* or the *Query Catalog* window and press [COPY], now click on a column in the results window and the new column will appear to the right of that column.

To remove columns from the query - To remove columns from the query, select any column in the *Query Results* window and [DELETE] it.

To Move columns within the query - There is no direct command to move columns within the query, to move columns you must Add and Delete columns as described above.

NOTE: You cannot Add or Delete columns in the query when data is being shown in the *Query Results* window, you must first select the *Clear Data* button in the *Query Results* window to remove the data before changing the columns in the *Query Results* window.

To save the query, just close it. Once the query is closed you can make as many copies of it as you like for as many applications as you want.

Getting the Results - Once all of the joins, the constraints and the columns you want are set, you can select *Show Data* in the *Query Results* window to execute the query and get the results. See the diagram on the next page. At the time you press the Show Data button the query tool will send a SQL statement to the database. The results of the query can be instantaneously or may take some time. The time it takes to display the data will depend upon how long the database server takes to resolve the query.

Stopping the query – If your query is taking too long or you want to [STOP] it just press F9, or if using touch, swipe two fingers in any direction.

For More Information – Please note this section of the guide is written as a quick start and introduction to the query tool. There are many more interesting and powerful functions in the tool and we encourage you to find more detailed explanation of these and other Query tool functions in the *Query Tool Manual*.

The screenshot displays the Meta5 Workstation interface. At the top, a callout box says "Note the Show Data and Clear Data buttons". The main window shows a query result with 12 items found, ordered as located in the database. The table has columns: market_desc, UNITS, and DOLLARS. The data rows are:

market_desc	UNITS	DOLLARS
Chicago	173,036	689,401
Cincinnati	42,016	182,944

Below the table is the Query Control window, which shows a diagram of the query structure. It includes tables: MARKET, SALES_FACTS, and PRODUCT. The MARKET table has columns: MARKET_KEY, market_lvl, market_desc, region, mkt_mgrs_email, mkt_admins_email, market_order. The SALES_FACTS table has columns: PRODUCT_KEY, MARKET_KEY, PERIOD_KEY, UNITS, DOLLARS, AVG_FTL_PRICE, DISPLAYS. The PRODUCT table has columns: PRODUCT_KEY, product_lvl, product_desc, prod_mgrs_email, prod_admins_email, brand, manufacturer, form, size, type. The diagram shows relationships between these tables and filters: "= Central" for MARKET, "= Q1 2014" for PERIOD, and "= Brand" for PRODUCT. The Query Catalog window is open, showing a list of columns and their descriptions for the MARKET, PERIOD, and PRODUCT tables.

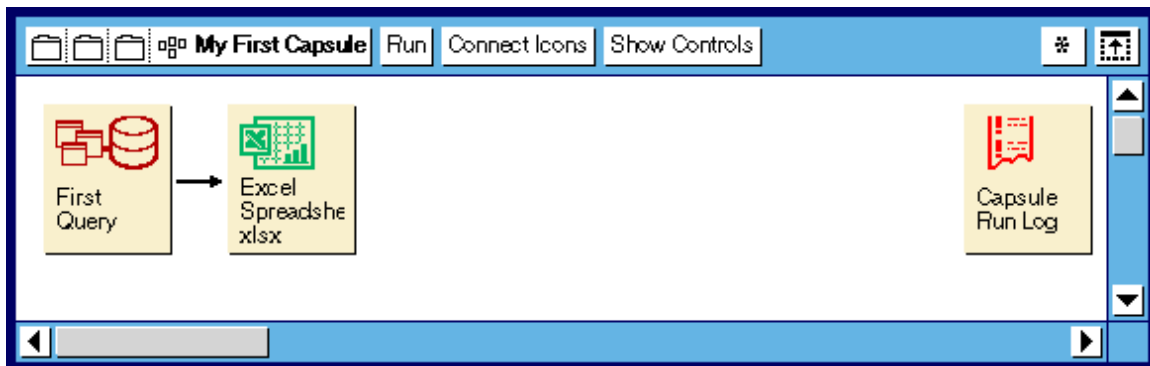
A copy of the completed *First Query* query can be found in the * *New Icons/Getting Started* Folder on your desktop. Feel free to copy it, play with it and make changes.

Building your first Meta5 Capsule Application

[Click for Video – Building Your First Capsule \(Query to Excel\)](#)

Capsules give you the ability to use individual tools as an integrated set. You can retrieve and manipulate data, generate reports and graphics by simply pressing a button once your Capsule has been built. Using Capsules makes your applications flexible, powerful and saves you time. You can easily create sophisticated applications and save them for regular use

We will now give you a quick overview of how to create your first Meta5 Capsule application. This Capsule will connect your *First Query* icon to an *Excel spreadsheet.xlsx* icon. The below Capsule example can be found in the *New Icons/Getting Started* folder if you want to see the completed result.



To Build this Capsule

- [COPY] a blank Capsule out of the *New Icons/* Blank Icons* folder onto your desktop.
- Rename the Capsule icon so you can find it easily on your desktop to *My First Capsule*. - Hint [SELECT] it then [OPTION] it
- Open the Capsule.
- [COPY] the *First Query* Icon from the *New Icons/Getting Started* folder into your opened Capsule
- [COPY] a blank *Excel Spreadsheet.xlsx* Icon from the *New Icons/* Blank Icons* folder and place it to the right of the Query Icon.
- [SELECT] the Query Icon so it is highlighted and then click on the *Connect Icons* button located in the Capsule window header. You

will receive the following message in the desktop message bar:
"Connecting. -- Select destination icon."

- Now, click the *Excel Spreadsheet.xlsx* Icon. An arrow connecting the two icons will automatically appear.
- Next, you will need to tell the arrow where you want the data to go in the Excel Spreadsheet. To do so [SELECT] the arrow you just created and [OPTION] it, an *Arrow Options* window will appear.

5 Meta5 Workstation - guest@

The screenshot shows the Meta5 Workstation interface. The main window is titled 'My First Capsule' and contains several icons: 'New Icons', 'My First Capsule', 'Beginner's Guide.pdf', and 'Beginner's Video Guide'. An arrow connects the 'First Query' icon to the 'Excel Spreadsheet.xlsx' icon. The 'Arrow Options' dialog box is open, showing the following settings:

- Stop Before Transfer: Yes No
- Stop on Null Data Transfer: Yes No
- Copy Data From: 'First Query'
- Source Area: [Empty]
- Copy Data To: 'Excel Spreadsheet.xlsx'
- Destination Area: All Data Other
- Region Name:

Eight numbered callouts provide the following instructions:

1. Click the query
2. Click Connect Icons button
3. Click the Excel Icon
4. Click the newly created arrow
5. press [OPTIONS] F4 or Alt Enter on your keyboard to open this Arrow Options window while the arrow is highlighted
6. Click on Other to copy the data to a specific place
7. Type a3 to start the placement of data in cell a3 in the Excel Spreadsheet
8. Close the Arrow Options window

- Click on the *Other* choice in the *Destination Area* and a *Region Name* field will appear.
- Type *a3* in the *Region Name* field. This tells the arrow to copy the data from the query to cell *a3* and continue copying the data for all the data returned from the query.
- Next close the *Arrow Options* window by clicking the name in the window header. Your Capsule is now ready to run.

Guidelines To Run a Capsule

- To run a Capsule, ensure that there are no icons or arrows [SELECT]ed (highlighted). Next, click on the *Run* button in the Capsule window header.
- When the Capsule is complete you will see a message in the bottom left corner of your desktop *Message Bar* saying “*Complete. – Please continue*”. You can now open the Excel Spreadsheet to view the data. If there was an error with the Capsule you will see “(See *Capsule Run Log* for more messages.)”. When an error occurs you can open the *Capsule Run Log* for help on the error.
- If you want, you can open the Query tool and change it, and re-run the Capsule to create a new Excel report. Note when you do this, the data in the Excel spreadsheet will be overwritten. (We will show you how to save the Excel spreadsheet to your PC later on in this guide) **NOTE:** The completed Capsule can be found in *New Icons\Getting Started* folder as *My First Capsule*.

Working with the Excel Spreadsheet icon.

The Meta5 Excel Spreadsheet icon can be thought of as an Excel Spreadsheet that is stored within the Meta5 system.

The Meta5 Excel Spreadsheet can be used within the Capsule to create dynamic reports, graphs or anything else you can do in Excel. Unlike other tools who just create Excel outputs, we actually use the full power of Excel within Meta5.

By simply connecting query tools and other icons to the Excel Icon you can copy data from these Icons into Excel and then use Excel for all of your formatting, calculations, pivoting and charting.

Working with Excel within Meta5

[Click for Video – Capsule Step 1 \(Working With Excel\)](#)

Let's continue using the Capsule example from above and open the Excel spreadsheet that is inside the *My First Capsule*, Capsule.

- Open the Meta5 Excel Spreadsheet icon. Note that the Excel window looks and behaves like Excel normally does in Windows, but it is actually stored within Meta5.
- Now format the data, add formulas and create a chart just like you would normally do in Excel, have fun and experiment. Try to create something like you see below

5 Meta5 Workstation - guest@Starter 1

The screenshot shows the Meta5 Workstation interface with an Excel spreadsheet window open. The spreadsheet displays a table of market data for various cities and a bar chart comparing units and dollars. The table has columns for market_desc, UNITS, and DOLLARS. The bar chart shows units in blue and dollars in red for each city.

market_desc	UNITS	DOLLARS
Chicago	173,036	\$ 689,401
Cincinnati	42,016	\$ 182,944
Cleveland	115,346	\$ 486,635
Dallas	48,130	\$ 163,926
Detroit	128,787	\$ 672,700
Houston	46,726	\$ 185,423
Indianapolis	46,565	\$ 177,552
Kansas City	34,401	\$ 131,215
Milwaukee	75,391	\$ 294,494
Minneapolis	41,292	\$ 175,374
Pittsburgh	90,431	\$ 386,819
St. Louis	43,331	\$ 148,699
TOTALS	885,452	\$ 3,695,182

- **Excel Hints;** Format column B as a number, Format column C as \$, highlight the data a3:c15 and go to the insert tab and Insert a graph, create a sum(b4:b15) in cell b17, create a sum(c4:c15) in cell c17, highlight a1:c1 fill in the paint color, highlight a3:c3 and fill in the paint color, highlight a17:c17 and fill in the paint. Type TOTALS in a17, Type Report for in A1, Type Total Napa in B2

NOTE: This guide is not meant to teach you how to use Excel and it is recommended that you seek other help to create the report.

- Don't worry, there is no need to make this report exactly as shown, it is just here for illustration purposes. Once you have made the modification you want in Excel, close the spreadsheet and save your changes.
- Now Close the Capsule and rename it to *My First Capsule Step 1*. Feel free to open the Capsule and run it as often as you want.
- If you want, open the *First Query* query icon and modify the *period_desc* constraint from **1Q 2014** to **2Q 2014**. Now run the Capsule and notice how the data and chart changed in the Excel spreadsheet.
- Please note, there are many other ways to use Excel within Meta5. We would encourage you to look into more examples and documentation to understand the full integration and automation functionality Meta5 has to offer using Excel.
- NOTE: There are two different ways to insert data into Excel using Meta5. You can insert data by directing it to cell *b3* in the arrow as described above. Using this method, data will be overlaid on top of existing data in the spreadsheet for the number of rows being inserted. An alternative way of inserting data uses Excel *Defined Names*. *Defined Names* will insert data into Excel and erase all of the data from the prior run. *Defined Names* will grow and shrink depending upon the amount of data being inserted into Excel. Whereas inserting data into a cell like *a3* just overlays the data for the amount of rows being inserted. To use *Defined Names*, first create a *Defined Name* in Excel, then in the arrow options instead of directing it to a specific cell like *b3*, you can direct it to the *Defined Name* you created in Excel. For more on *Defined Names* just google *Defined Names* and Excel.

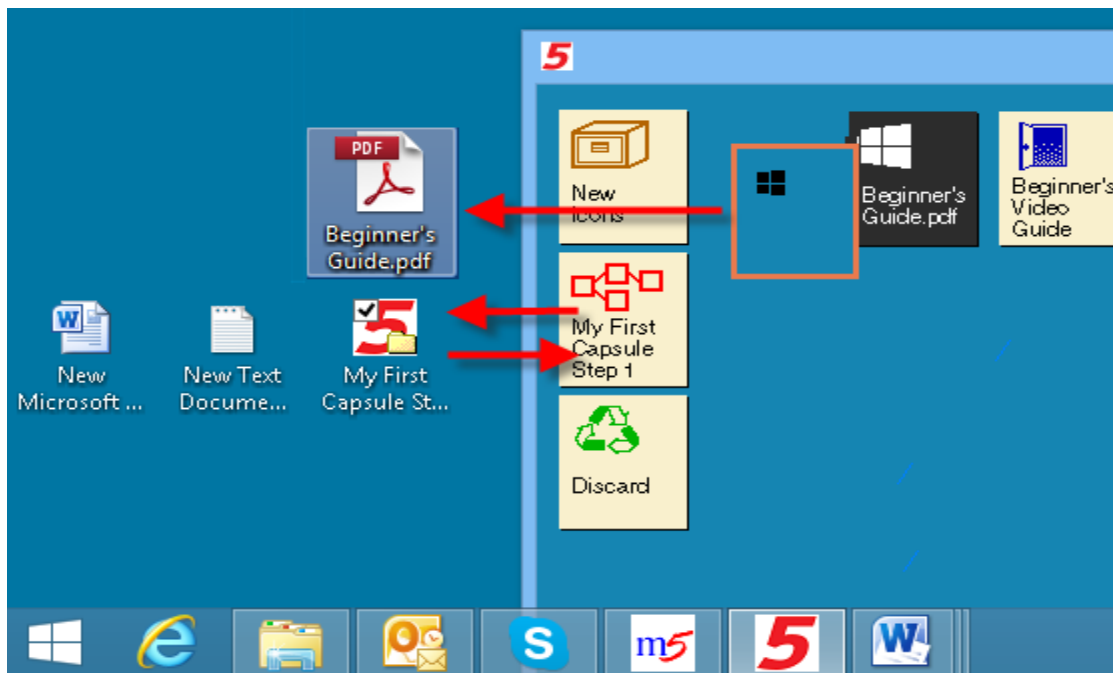
Exchanging icons/files between Meta5 and your PC

[Click for Video – Capsule Step 2 \(Exchanging Files Between PC\)](#)

Drag and Drop

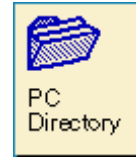
To copy icon/files between Meta5 and your PC simply drag and drop them back and forth between the two environments. You can simply select the icon, such as an Excel Spreadsheet icon, and drag it to the Windows desktop or Windows Explorer. Alternatively, you can select a file from Windows Explorer or the Windows desktop and drag and drop it on to the Meta5 desktop to create a new Meta5 icon. The drag and drop feature works both ways to and from Meta5.

NOTE: if your icon is connected in a Capsule drag and drop will not work. Drag and drop only works with icons that are not connected by arrows, you must first make a [COPY] of the icon within meta5 (so it is not connected) and then you can drag and drop it to your PC. Also note, Ctrl+C and Ctrl+V will not work to exchange file/icons, only drag and drop works to exchange files between Meta5 and your PC unless you use *PC Directory* described next.



NOTE: Dragging and dropping your Meta5 Capsules or folders to your PC is a great way to back them up and share them with other Meta5 users.

Exchanging Meta5 icons and PC files using PC Directory



What is PC Directory?

The PC Directory tool enables you to open a window in Meta5 that displays information about the contents and directories on your PC. The PC Directory is also used to exchange files between Meta5 and your PC. You can easily copy, rename and delete files on your Windows PC using PC Directory. PC Directory is also used to automatically import and export files to and from Meta5 from within a Capsule. It's like Windows Explorer within Meta5.

The PC Directory tool will convert your PC files into Meta5 icons that you can use directly on your Meta5 desktop. Some files will need no conversion, while others will need to be converted to use them. You can also set conversion options to instruct the PC Directory tool to use different formats depending upon your needs. (For more information on how to use PC Directory to set different conversion types see the *Meta5 Getting Started Manual*)

Some of the most common files that you will exchange between Meta5 and your PC are as follows:

<u>PC File Extension</u>	<u>Meta5 Definition</u>
TXT	Text file or .TXT icon
RTF	Rich Text Format
DOC or DOCX	MS Word document
XLS or XLSX	MS Excel file
DIF	Data Interchange Format
PDF	M5 Windows Icon with .PDF extension
M5	Meta5 Capsule or folder

Some typical reasons why you may use PC Directory:

- To save Excel Spreadsheets or Word Documents created in Meta5 Capsules to your PC.
- To import PC Excel spreadsheets or Word documents into Meta5.
- To import large ad-hoc CSV, Text or DIF files into Meta5.
- To share a Meta5 Capsule with other Meta5 users.

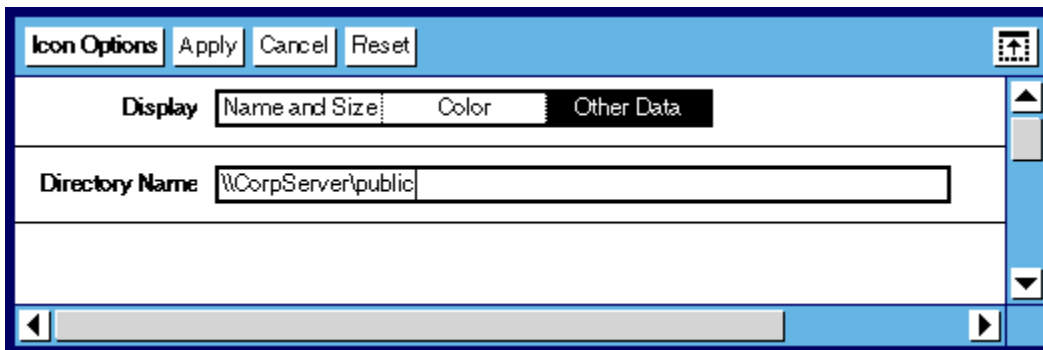
How to obtain a PC Directory Icon

PC Directory icons are located inside the * *New Icons* / **Blank Icons* folder.

- Open the * *New Icons* / **Blank Icons* folder.
- [COPY] a PC Directory icon to your desktop.
- Open the PC Directory icon. The PC Directory window appears, displaying a list of your PC files and directories. By default, a blank PC Directory icon is configured to point to the C:\ drive and directory.

To View a Different PC Drive or Directory

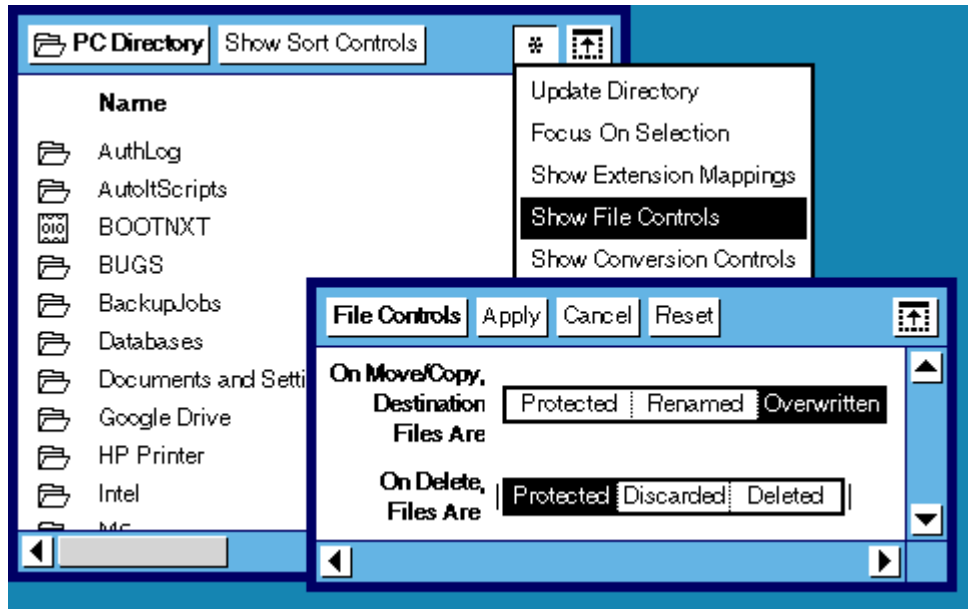
- Close the PC Directory, then [SELECT] *highlight* PC Directory icon and [OPTION] (*F4 or Alt-Enter*), it.
- Select *Other Data* from the Display field.
- Enter the drive and path, or Network path or system variable that you want to view in the *Directory Name*. Some examples include; C:\Temp, P:\, \\machinename\path, %TEMP%, %TEMP%\Meta5.



To Change PC File Protection

When you use PC Directory, your PC files are protected by default. So if you try to copy a Meta5 icon/file to the PC Directory that contains a file with the same name it will stop with a warning message, saying file already exists. If you want the file to be overwritten you must change the File Protection on the PC Directory Icons.

- To change the file protection while the PC Directory icon is open [SELECT] *Show File Controls* in the * *Special* menu of the PC Directory window header. The File Controls window displays.



- For protection against accidental moving or copying of files, select the appropriate setting in the on “*Move/Copy, Destination Files Are*” field:
 - Protected** prevents a file from being copied or moved.
 - Renamed** writes a new file rather than replacing a file of the same name. The default is to use the original name and add an incremental number. Just like Windows
 - Overwritten** replaces a file of the same name.
- For protection against accidental deletion of files, select the appropriate setting in the “*On Delete, Files Are*” field:
 - Protected** prevents a file from being deleted. This is the most common setting used to prevent accidental deletion of PC files from within the Meta5 PC Directory Icon.

- **Discarded** places deleted PC files in the Discard folder on your Meta5 desktop as Meta5 icons.
- **Deleted** removes the file.

To Delete a PC File using Meta5 PC Directory

- While the PC Directory icon is open [SELECT] on the PC file to be deleted in the PC Directory window.
- Press the [DELETE] key, the file will disappear from the PC Directory window and the PC.

How to exchange files with PC Directory

In order to exchange files, simply open the PC Directory and [MOVE]/[COPY] files from PC Directory on to your Meta5 desktop or [MOVE]/[COPY] icons from the Meta5 desktop into the PC Directory.

Copying Meta5 Icons to the PC using a Capsule

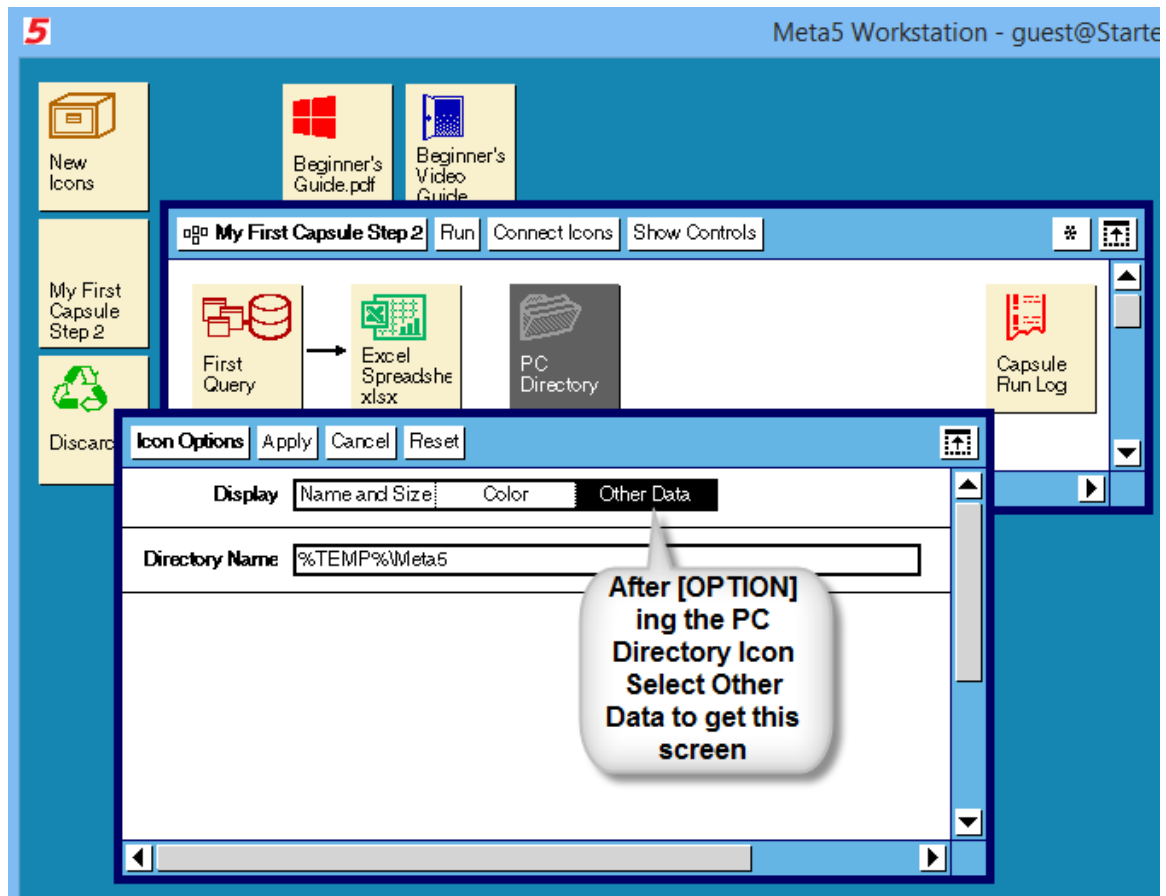
[Click for Video – Capsule Step 3 \(Copying Icons to the PC Using Capsule\)](#)

You can use the PC Directory Icon to transfer files between Meta5 and your PC automatically. This is helpful if you want to save files created in a Meta5 Capsule to your PC.

Let's continue using the Capsule example from above. To continue, [COPY] the *My First Capsule Step 2 Capsule* located in the ** New Icons\Getting Started* Folder to your desktop.

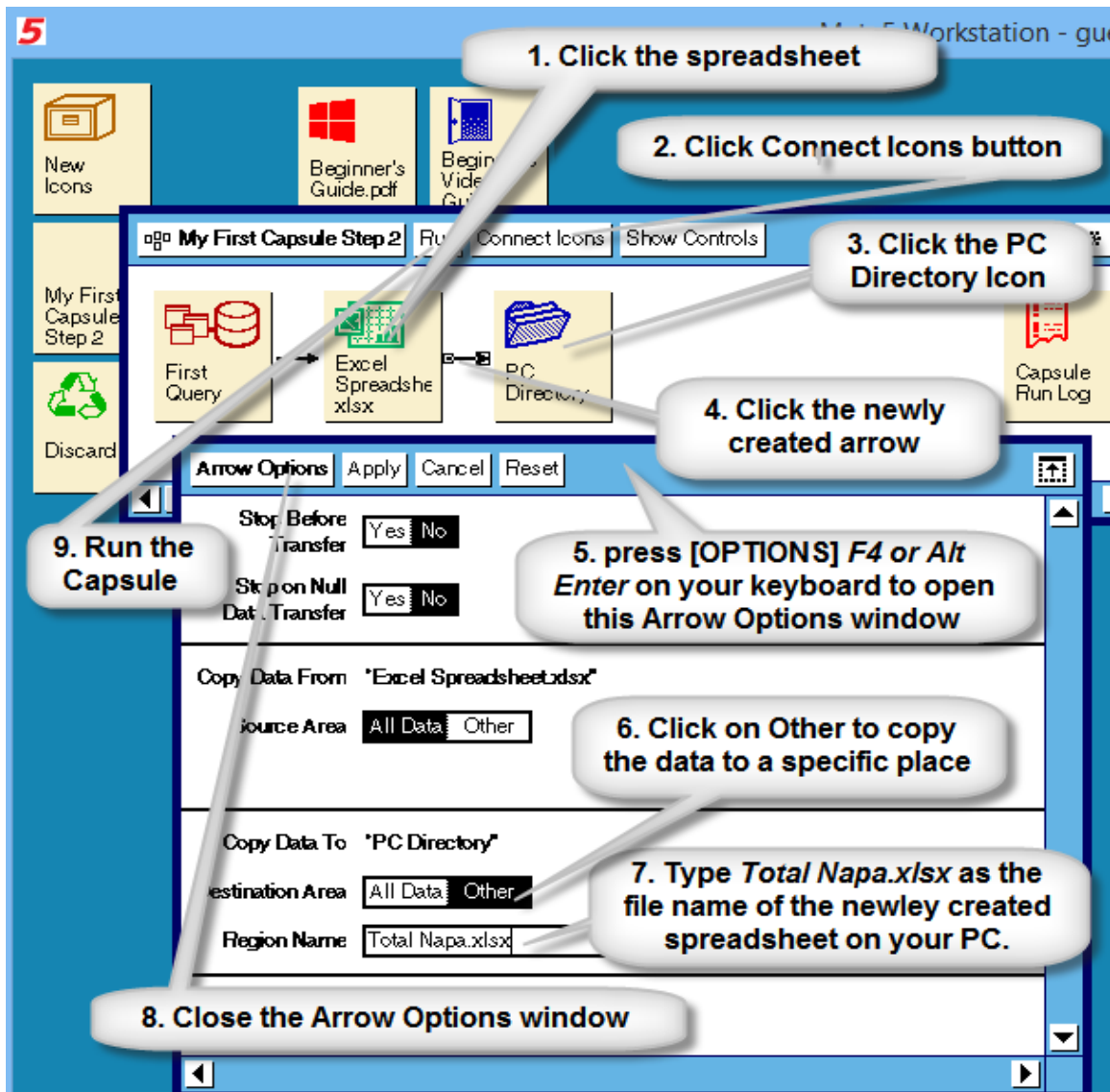
Open that Capsule and notice the PC Directory icon. To see the properties/options/path defined to this PC Directory icon [SELECT] it and [OPTION] (*F4 or Alt Enter*) it.

After Optioning the PC Directory icon select the *Other Data* tab. Notice the Directory Name *%TEMP%Meta5* the PC Directory is pointing to this path on your PC. The Directory Name can be any valid directory for example; C:\temp, X:\, P:\Shared, %TEMP%, \\Machine\path and valid path will work.



Now close the Icon Options window of PC Directory.

- Next [SELECT] the Excel Spreadsheet Icon so it is highlighted and then click on the *Connect Icons* button located in the Capsule window header. You will receive the following message in the desktop message bar:
"Connecting. -- Select destination icon."
- Now, click the *PC Directory* Icon. An arrow connecting the two icons will automatically appear.
- Next, you will need to tell the arrow what filename you want to call the Excel Spreadsheet Icon. To do so [SELECT] the arrow you just created and [OPTION] it, an arrow Options window will appear.

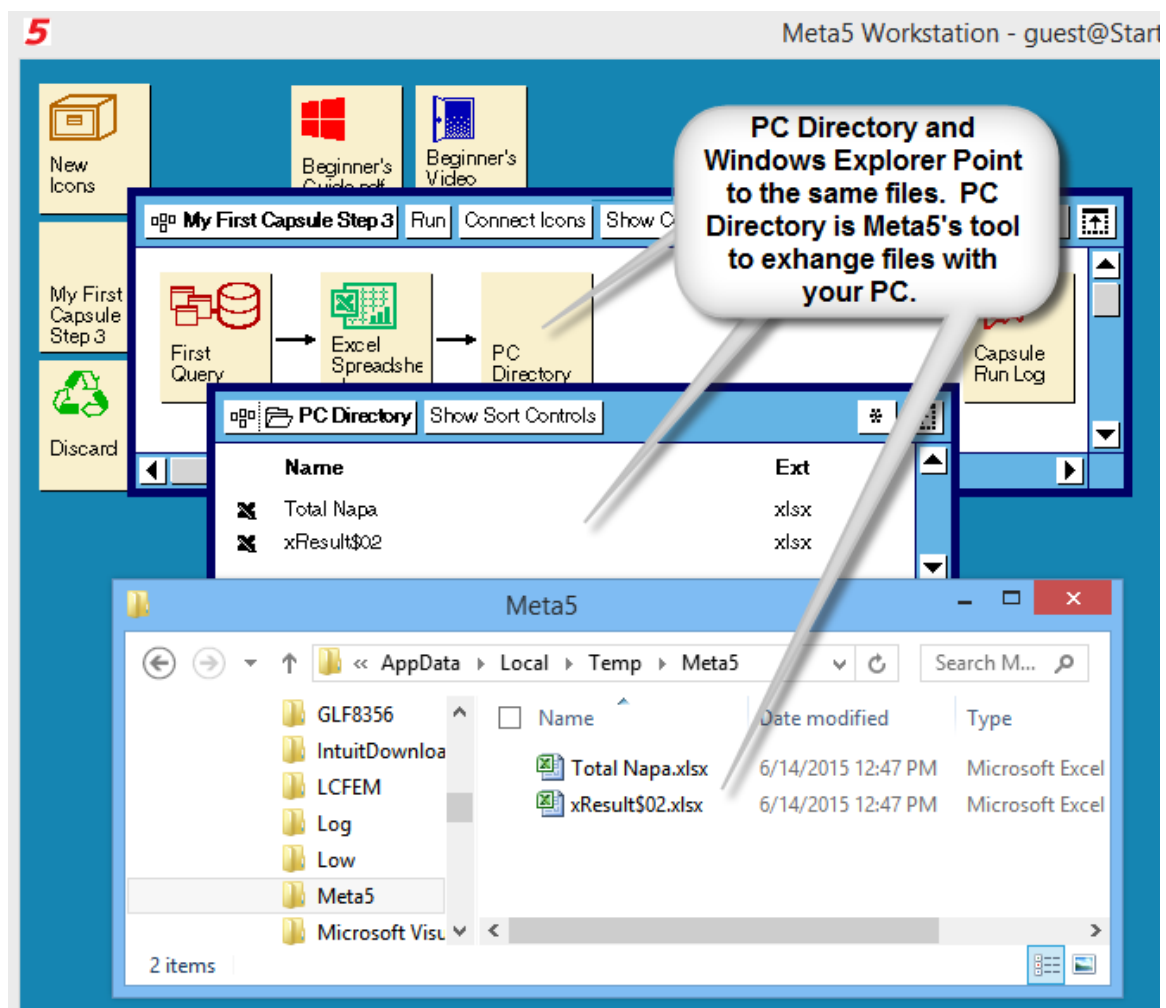


- Click on the *Other* choice in the *Destination Area* and a *Region Name* field will appear.
- Type *Total Napa.xlsx* in the *Region Name* field. This tells the arrow to copy the Excel Spreadsheet Icon from Meta5 to your PC with the name *Total Napa.xlsx*.
- Next close the *Arrow Options* window by clicking the name in the window header. Your Capsule is now ready to run. Be sure to [DESELECT] so no icons or arrows are selected before you run the Capsule. Let's rename it to *My First Capsule Step 3*.

NOTE: If you make a mistake you can always [SELECT] the arrow and press [DELETE]

Now run the Capsule. Once the Capsule is completed open the PC Directory and notice the *Total Napa.xlsx* spreadsheet. At the same time open Windows explorer and you will see the same file that is in the PC Directory Icon. You may also see some temporary Meta5 files that are uses during processing, by default Meta5 uses the %TEMP%\Meta5 directory for storing it's working files. For fun change the path in PC Directory to another PC folder.

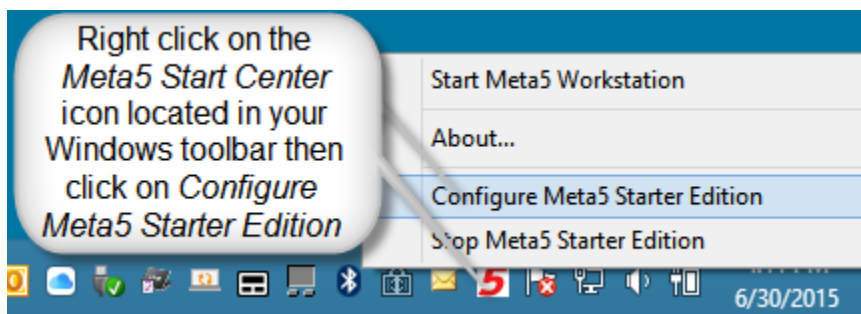
Hint: [SELECT] PC Directory and [OPTION] it, then choose *Other Data* and type in the new path name. Run it again and see the *Total Napa.xlsx* spreadsheet copied to your new path.



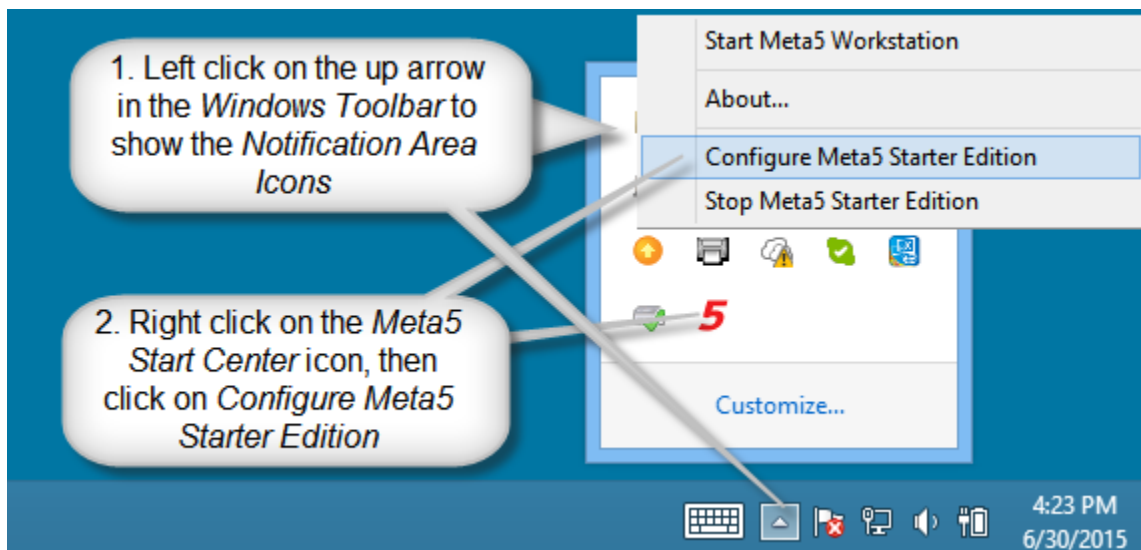
Configuring Meta5 to use Email with your SMTP server

[Click for Video](#) – [Capsule Step 4 \(Using Email\)](#)

You can send emails using Meta5, but first we need to configure Email to work within Meta5. Meta5 uses *Simple Mail Transfer Protocol* (SMTP) and is the standard protocol for sending emails across the Internet. Configuring Meta5 Email is started by first right clicking the *Meta5 Start Center* icon located in the lower right corner of your Windows Toolbar, then clicking on *Configure Meta5 Starter Edition*. For example, your Windows toolbar may look like one of the following:

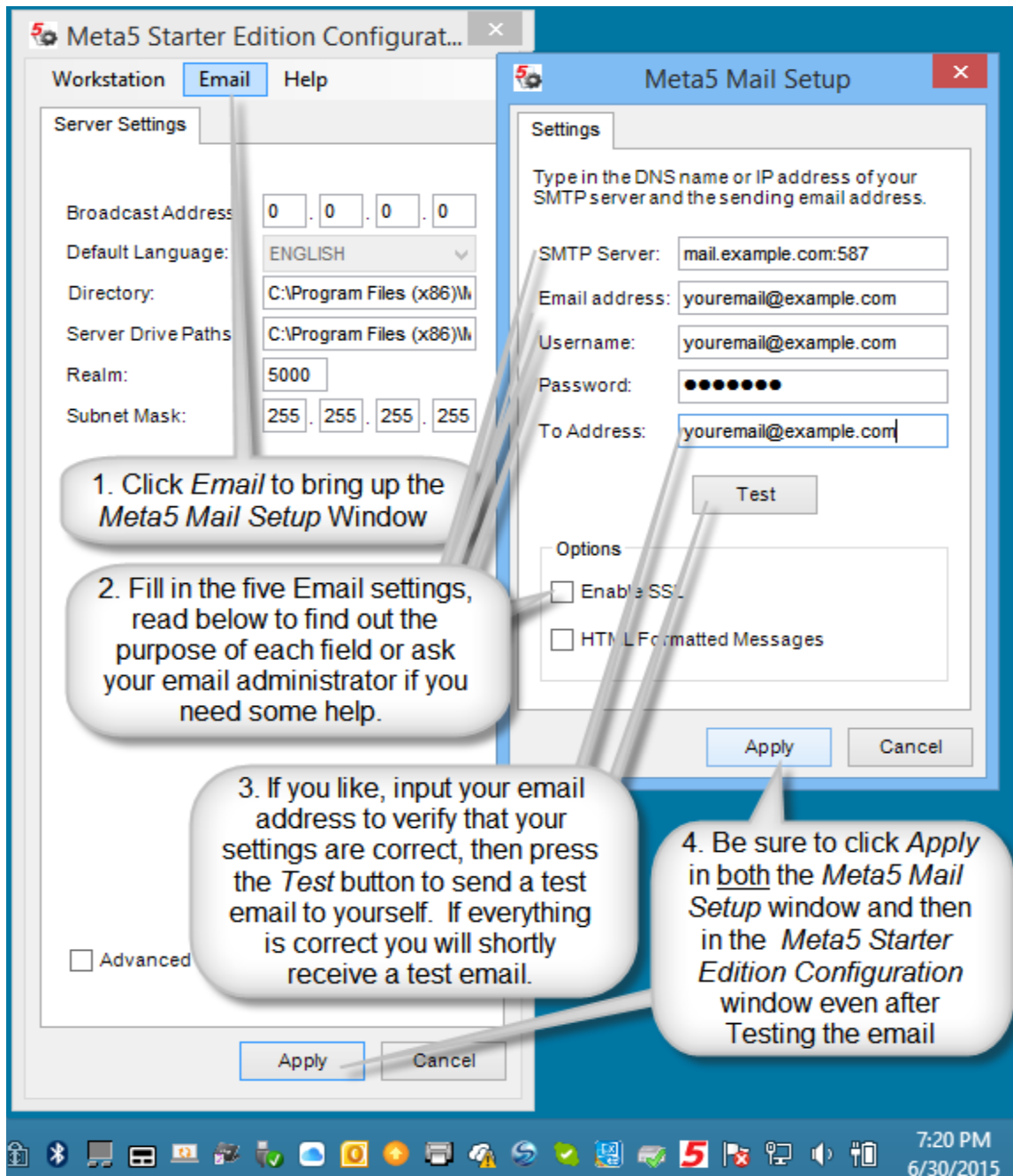


Windows Toolbar with Notification Icons being shown



Windows Toolbar with Notification Icons being hidden

Click on *Configure Meta5 Starter Edition* to invoke the *Meta5 Starter Edition Configuration Tool* shown below;



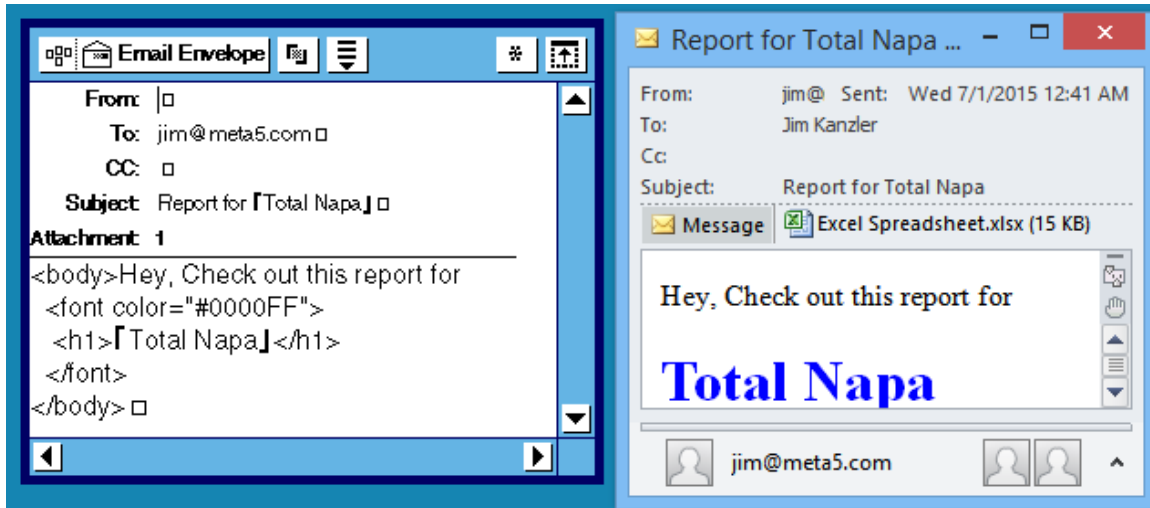
This shows the *Meta5 Starter Edition Configuration* window and the *Meta5 Mail Setup* window, Meta5 Mail Settings are described below. For information on additional Meta5 Starter Edition Configuration settings please refer to the *Meta5 Getting Started* Manual. NOTE: Once your email settings are entered make sure to click *Apply* on both the *Meta5 Mail Setup* window and the *Meta5 Starter Edition Configuration* window in order to save your configuration.

Meta5 Mail Settings

Meta5 uses the *Simple Mail Transfer Protocol* (SMTP). Below are the descriptions of the settings that need to be configured in order to enable Email to work within Meta5.

- SMTP Server: and Port
This is the mail server address, it can be an IP address or a host name the format is **server:port** Port refers to the port number on the server which is used to send out the email. Typically Port 25 is the default SMTP non-encrypted port. Port 465 is typically used if you want to send messages using SMTP securely. Check with your ISP provider or system administrator for the port used for your SMTP email.
Example: mail.example.com:25 (*this example will used port 25*)
- Email address:
This is the default **From:** email address used when you do not specify a **From:** in your Meta5 Envelope. Typically you will enter your normal email address, but you might want to use an alias **From:** email address.
Example: joe@example.com (*this uses a normal email address for From:*)
Example: Meta5Capsule@example.com (*this uses an alias email From: address*) Note: your SMTP mail system may require this to be a valid email address for it to work properly.
- Username:
This is the email username that is used to connect to the SMTP mail server. Typically it will be your email address, but you may use an alternative format of the username if your server allows or requires it.
Example: joe@example.com
Example: [joe](#)
- Password:
This is the password that is used in conjunction with the *Username* fields above and is masked and encrypted. **Note** if you should change the email password you will need to change this field too.
- Enable SSL:
This is a checkbox that will turn on or off Secure Sockets Layer (SSL) if this is require for your SMTP email system.

- HTML Formated Messages:
This is a checkbox that will allow you to create very rich HTML type email messages in the body of the Meta5 Envelope. If you enable this feature you should use HTML within the body of the emails you are sending.



Meta5 Email Envelope using HTML within the body of the email message. This requires the HTML Formated Messages checkbox enabled. Also show is the resultant email as it would appear in Outlook.

Testing your email configuration

If you like, you can test the email configuration you've entered to make sure the email settings are correct. First type in all of the required fields, then to test the configuration put your email address in the **To Address:** field then click the **Test** button. Meta5 will then attempt to send a test email to your address and if configured properly you should receive an email shortly.

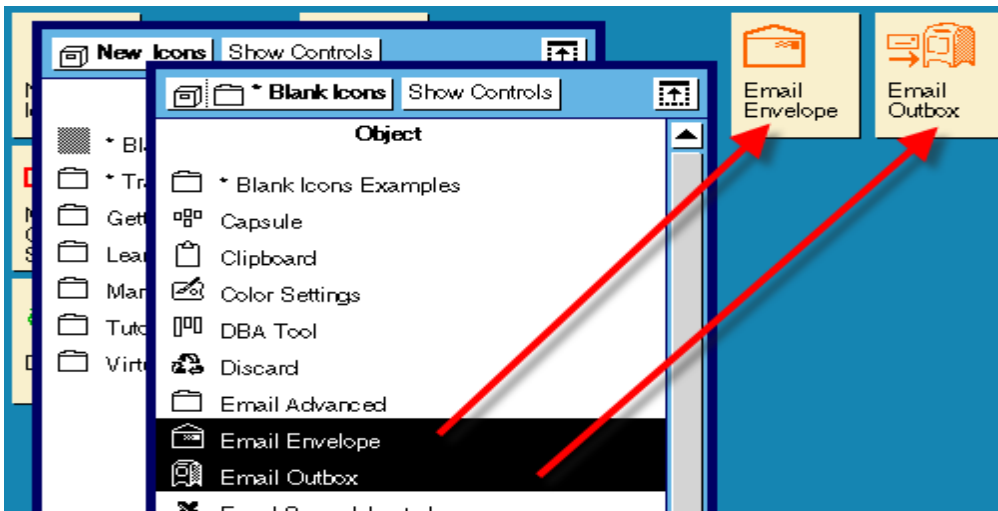
This is a typical email settings that we've tested to work with Gmail.

SMTP Server: smtp.gmail.com:587
 Email Address: your_gmail_address@gmail.com
 Username: your_gmail_address@gmail.com
 Password: *****
 Enable SSL: **YES**

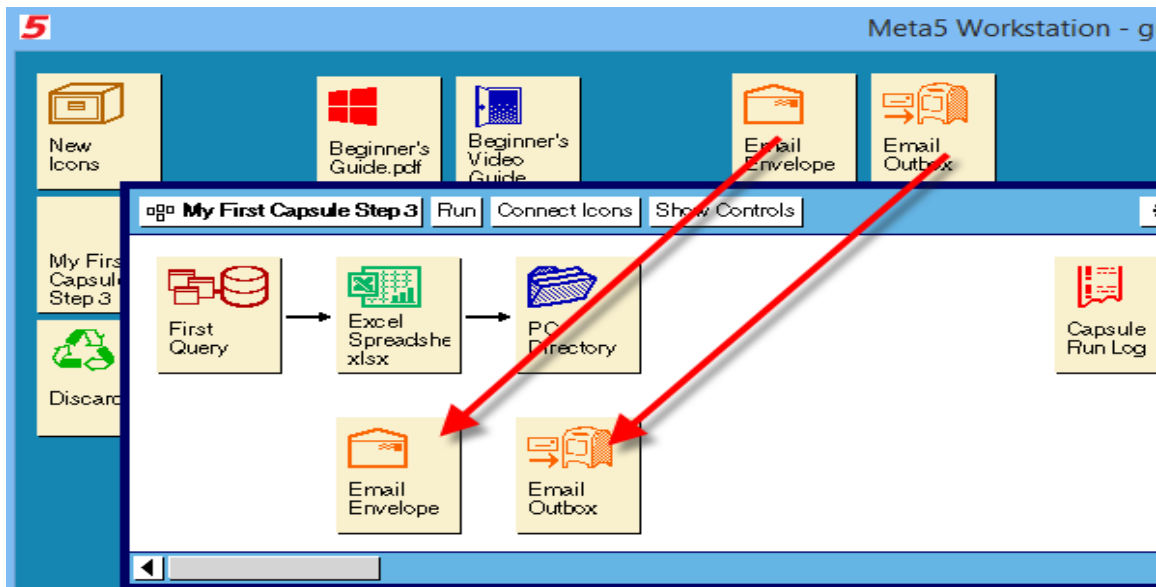
NOTE: you may have to change some of your security settings in gmail to *allow outside applications* such as Meta5 to send mail.

Using Email within a Capsule

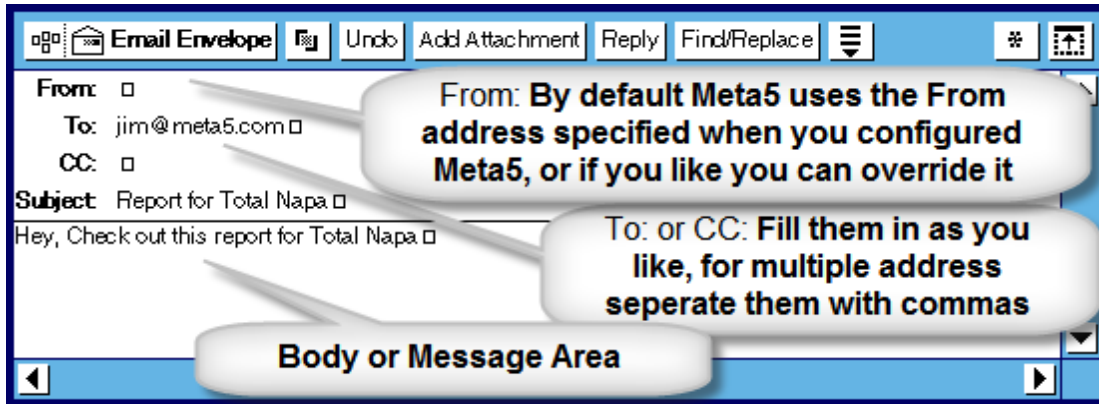
Once Email has been configured, Meta5 will allow you to send emails from within any Meta5 Capsule application. There are two icons needed to use email; the *Email Envelope* icon and the *Email Outbox* icon. [COPY] these icons to your desktop from the *New Icons/* Blank Icons* folder.



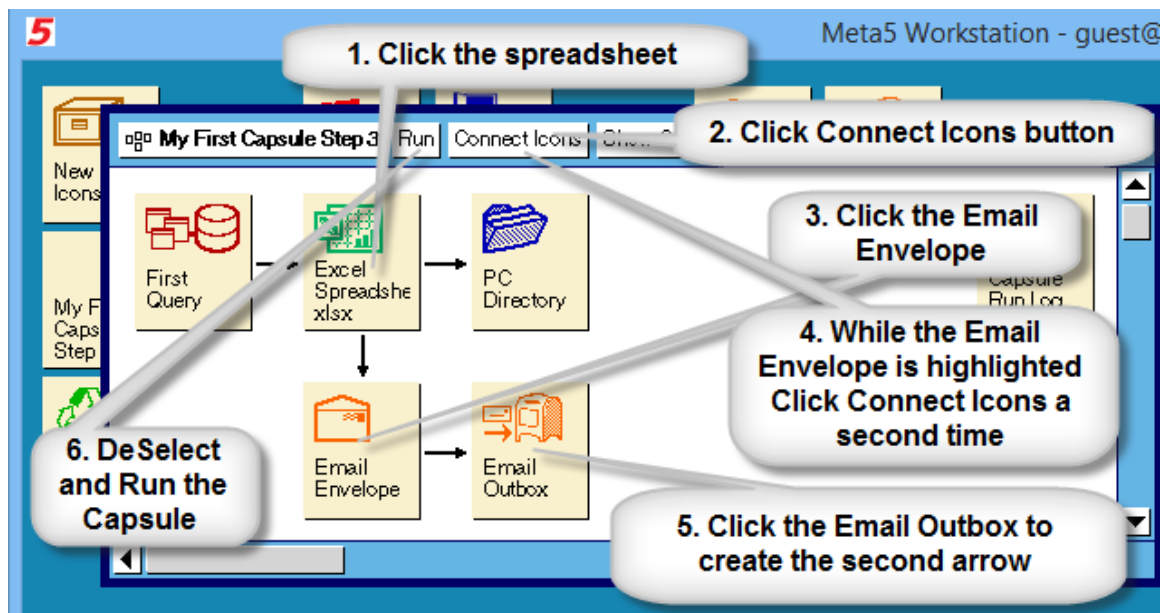
For now let's continue using the Capsule example from the previous example to show you how to use email within Meta5. Next [COPY] the *My First Capsule Step 3 Capsule* located in the ** New Icons\Getting Started Folder* to your desktop, then open it, next [COPY] or [MOVE] the *Email Envelope* and *Email Outbox* icons to the *My First Capsule Step 3 Capsule* as shown below.



Next [OPEN] the *Email Envelope* and fill in the following as shown below. Feel free to fill in your own email, subject and message. Now close the envelope to save it.



Next connect the *Excel Spreadsheet.xlsx* icon to the *Email Envelope* icon and then the *Email Envelope* icon to the *Email Outbox* icon as shown below.



NOTE: There is no need to set Options on the two arrows you just created as the whole spreadsheet will be copied as an attachment to the envelope and the entire envelope will be sent to the Email Outbox .

NOTE: The Email Outbox cannot be opened. Its only purpose is to deliver envelopes within Capsules.

Now close the above Capsule then [OPTION] it, and rename it to *My First Capsule Step 4*. To learn more about Email and various settings including how to embed HTML into emails refer to the Meta5 *Getting Started Manual*.

The screenshot displays the Meta5 Workstation interface. At the top, a capsule window titled "My First Capsule Step 4" is shown with a workflow diagram. The workflow consists of the following steps: "First Query" (database icon) → "Excel Spreadsheet.xlsx" (spreadsheet icon) → "PC Directory" (folder icon) → "Email Envelope" (envelope icon) → "Email Outbox" (outbox icon). A "Capsule Run Log" icon is also visible.

Below the capsule window, an Outlook window titled "Report for Total Napa - Message (HTML)" is open. The email content includes the following text: "Hey, Check out this report for T". The email is from "jim@meta5.com" to "Jim Kanzler" with the subject "Report for Total Napa". An attachment "Excel Spreadsheet.xlsx" is visible.

The Excel spreadsheet is also open, showing a report for "Total Napa" with the following data:

market_desc	UNITS	DOLLARS
Chicago	173,036	\$ 689,401
Cincinnati	42,016	\$ 182,944
Cleveland	115,346	\$ 486,635
Dallas	48,130	\$ 163,926
Detroit	128,787	\$ 672,700
Houston	46,726	\$ 185,423
Indianapolis	46,565	\$ 177,552
Kansas City	34,401	\$ 131,215

A bar chart is embedded in the spreadsheet, showing the dollar values for each market description. The y-axis ranges from 0 to 800,000. The chart uses blue bars for units and red bars for dollars.

The figure above shows the completed *My First Capsule Step 4* Capsule as well as the resulting email in Outlook with an attachment.

Using @Variables within a Capsule

[Click for Video – Capsule Step 5 \(Using @Variables\)](#)

Meta5 Capsules have variables to make your applications more flexible and powerful. We call the variables @Variables. Each Capsule has its own set of @Variables specific to that Capsule application. @Variables can be found by clicking on the *Show Controls* button in the Capsule header.

Each icon contained within the Capsule can access @Variables, that way you can make a change to the variable in the *Show Controls* button and all icons within the Capsule will use the new value set for that @Variable. Let's show you what we mean by an example.

For now let's continue using the Capsule example from above to show you how and why to use @Variables. Now [COPY] the *My First Capsule Step 4* Capsule located in the ** New Icons\Getting Started* Folder to you desktop, then open it, and click on Show Controls. Here you will see a list of @Variables A-Z, AA-AZ, BA-BZ... 256 in all to choose from. You can assign any meaning you want to them, they are variables! To remind you what the variables do in your Capsule it is recommended you type a name in the Description. The Value field is where you set the variable.

Meta5 Workstation - guest@Starter Edition

Click on Show Controls to bring up the User Input Control window where all @-Variables are stored for this capsule

NOTE: Any icon within this capsule can get the value of any @-Variable stored in this User input Control Window.

Type in a name for the Description of the Variable, and type in a Value for the Variable to change it.

	Description	Type	Value
⊕ A	Product Description	Text	Total Pioneer
⊕ B		None	
⊕ C		None	
⊕ D		None	
⊕ E		None	
⊕ F		None	

Type in **Product Description** for the *Description* of @A and **Total Pioneer** for the *Value* of @A and then close the *User Input Control* window.

Next, we will show you how to place the @A Variable in the First Query Icon, the Excel Spreadsheet Icon, the PC Directory Icon and the Email Envelope Icon.

Placing @Variables in the Query Icon constraints

To place @Variables in the Query Icon constraints just type in the @Variable name you want where you would normally place the constraint value. For example, open the *First Query* icon found in the *My First Capsule Step 4* folder and [SELECT] and [OPTION] the *Total Napa* constraint found on the *product_desc* field. The *Comparison Options* window opens. Change the Value from *Total Napa* to @A. After making the change close both the Comparison Options and First Query windows.

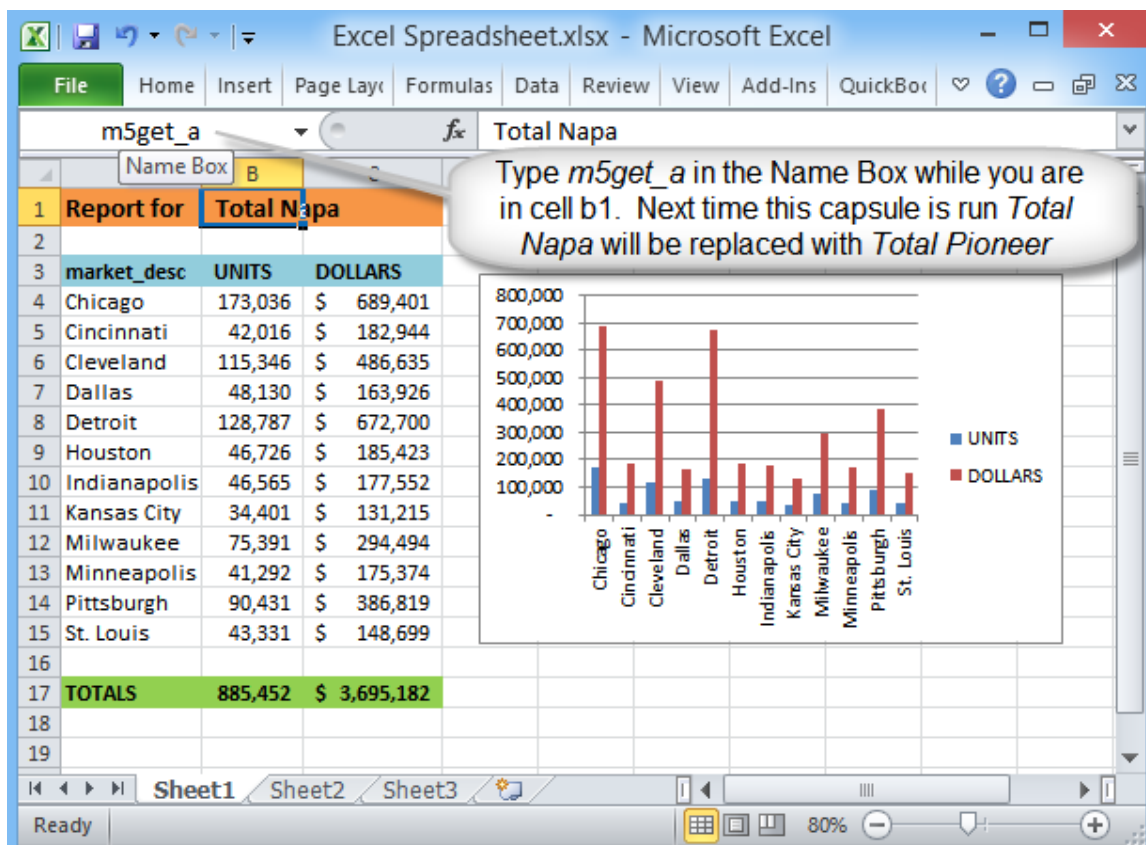
The screenshot shows the Meta5 Workstation interface. At the top, it says "Meta5 Workstation - guest@Starter Edition". Below that, there's a "First Query" window with "Show Data" and "Clear Data" buttons. A table is visible with columns "market_desc", "UNITS", and "DOLLARS". Below the table is a "Query Control" window with "Show Query" and "Clear Query" buttons. The query control shows a database schema with tables: MARKET, SALES_FACTS, PRODUCT, and PERIOD. The SALES_FACTS table has fields UNITS and DOLLARS checked. A callout box points to the @A variable in the query control, stating: "When this capsule is Run it will substitute Total Pioneer for the value of @A". Another callout box points to the product_desc field in the SALES_FACTS table, stating: "We replaced the Total Napa constraint by [SELECT]ing and [OPTION]ing this field and then by typing in @A".

When this Capsule is *Run*, the query will execute and the constraint on the *product_desc* field will be the current value of @A at the time the Capsule is run. In this case *Total Pioneer* will be the new constraint because that is what you typed in for the value of @A in the Capsule *Show Controls/User Input Control*.

Placing @Variables in the Excel Spreadsheet Icon

To place @Variables in the Excel Spreadsheets within Meta5 we use an Excel feature called *Defined Names*. Each version of Excel has slightly different ways to define names. To learn more about your specific version of Excel you can Google *Excel Defined Names* on the internet.

The Excel Defined name must follow a specific naming convention for Meta5 to place the @Variable in the excel spreadsheet. The naming convention is as follows **M5GET_?** Where the ? is the @Variable you want. For example **m5get_a** will retrieve @A, **M5GET_BB** will retrieve @BB and so on... The *m5get_* is non-case sensitive.



To set the @A variable to cell b1 in Excel 2010; Select *b1* the cell that you want to name. Click the Name box at the left end of the formula bar in Excel. Now type *m5get_a* and press Enter key. Now close the Excel icon within the Meta5 Capsule and the next time the Capsule is run the value of @A will appear in cell *b1*, in this case the value of *Total Pioneer*.

Using @Variables as the filenames for files written to your PC.

To use @Variables as the name of the files you are writing to your PC, you need to set the arrow connecting the icon to the PC Directory icon. For example, in the *My First Capsule Step 4 Capsule* [SELECT] the arrow connecting the *Excel Spreadsheet* icon to the *PC Directory* icon and [OPTION] it. Now, change the name from *Total Napa.xlsx* to *@A.xlsx*. When the Capsule is run, the value of @A will be substituted dynamically as the name of the Excel spreadsheet that will be written to the PC.

5 Meta5 Workstation - guest

FYI, Show Controls are where @Variables are stored

[SELECT] this arrow and [OPTION] it to open the Arrow Options window

Change the name from *Total Napa.xlsx* to *@A.xlsx* as shown. The value of @A will be substituted from the Show Controls when the capsule is run.

Arrow Options Apply Cancel Reset

Stop Before Transfer Yes No

Stop on Null Data Transfer Yes No

Copy Data From "Excel Spreadsheet.xlsx"

Source Area All Data Other

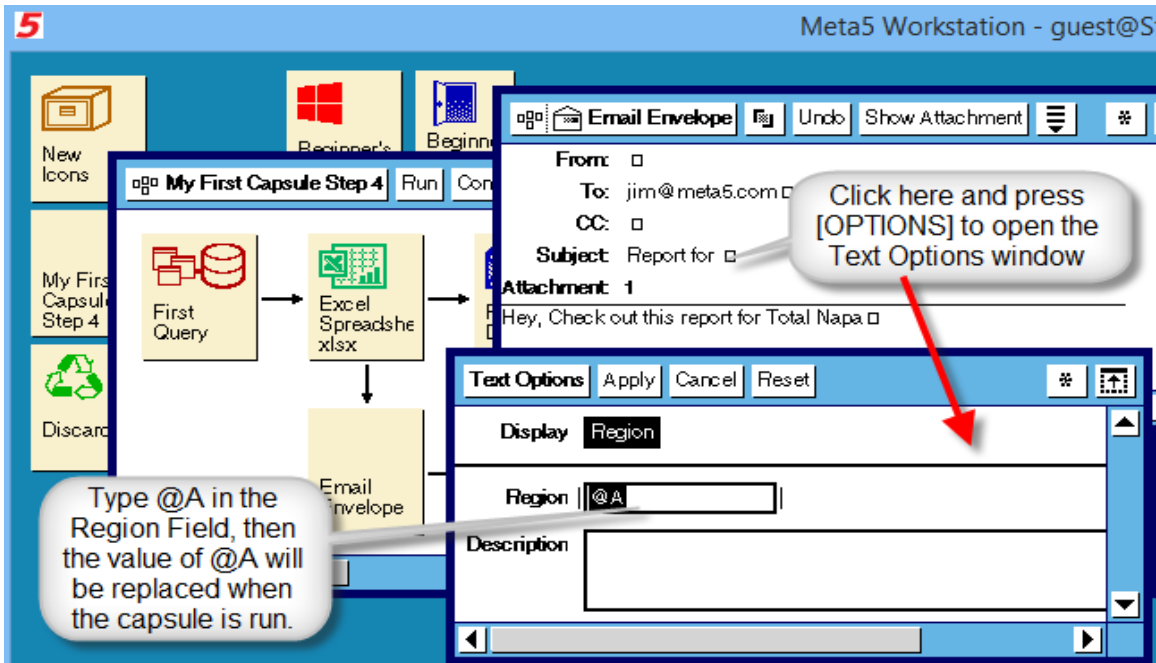
Copy Data To "PC Directory"

Destination Area All Data Other

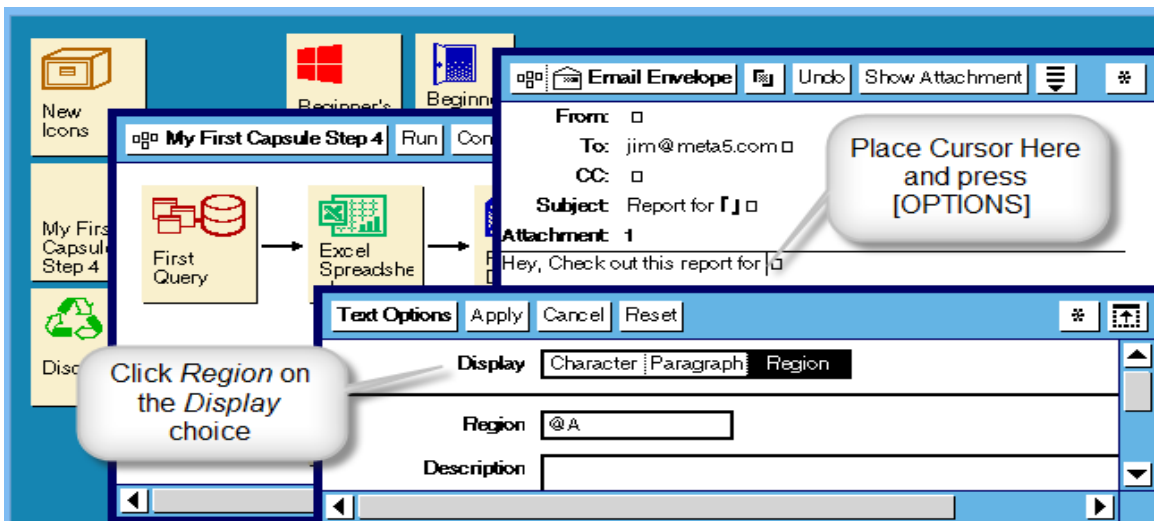
Region Name @A.xlsx

Using @Variables for Email messages and content

To use @Variables within emails you need to insert special regions called *Text Options* within your email message. For example, in the *My First Capsule Step 4* Capsule open the Email Envelope, click on the Subject area and delete the *Total Napa* text. Now, while the cursor is still in the Subject field, [OPTION] it and a *Text Options* box will appear, type @A in the *Region* field.



Repeat this for the *Total Napa* text in the body of the email. Note that this *Text Options* is slightly different, and requires a click on *Region* in the *Display* choice.



Once you have created the text regions in the *Email Envelope*, save the envelope by closing the window, then close the Capsule and rename it by [OPTION]ing it (*F4* or *Alt-Enter*) when the Capsule is closed. Rename the Capsule to *My First Capsule Step 5*. Open and run the Capsule. Notice how the value of @A in this case *Total Pioneer* is substituted wherever @A is used.

5 Meta5 Workstation - guest@Starter Edition

The screenshot displays the Meta5 Workstation interface with several windows open:

- My First Capsule Step 5:** A workflow diagram showing the sequence: First Query → Excel Spreadsheet.xlsx → PC Directory → Email Envelope → Email Outbox.
- User Input Control:** A dialog box with 'Range of variables' set to 'A-Z | AA-AZ | BA-BZ | CA-CZ'. The 'Description' field contains '@A' and the 'Type' field contains 'Text'. The value 'Total Pioneer' is entered in the adjacent field.
- Email Envelope:** A window showing email configuration:
 - From: [empty]
 - To: jim@meta5.com
 - CC: [empty]
 - Subject: Report for [Total Pioneer]
 - Attachment: 1
 - Body: Hey, Check out this report for [Total Pioneer]
- Excel Spreadsheet.xlsx:** A spreadsheet with the following data:

market_desc	UNITS	DOLLARS
Chicago	855,126	\$ 2,973,165
Cincinnati	715,693	\$ 2,745,583
Cleveland	660,429	\$ 2,428,655
Dallas	#####	\$ 4,110,564
Detroit	876,813	\$ 3,636,236
Houston	#####	\$ 4,012,151
Indianapolis	843,953	\$ 3,082,368
Kansas City	435,845	\$ 1,617,372
Milwaukee	397,086	\$ 1,436,006
Minneapolis	490,275	\$ 1,759,907
Pittsburgh	556,775	\$ 2,134,154
St. Louis	579,216	\$ 2,110,796
TOTALS	#####	\$32,046,957
- PC Directory:** A window showing a list of names: Total Napa, Total Pioneer.
- Arrow Options:** A dialog box with 'Copy Data From' set to 'Excel Spreadsheet.xlsx' and 'Copy Data To' set to 'PC Directory'. The 'Region Name' is '@A.xlsx'.

A callout box states: "This is the completed My First Capsule Step 5 Capsule showing where the value of @A is stored. How @A was substituted to create the Total Pioneer.xlsx file, the use of the m5get_a defined name in cell b1 in Excel, and how @A is used in the Subject and Body of the Email"

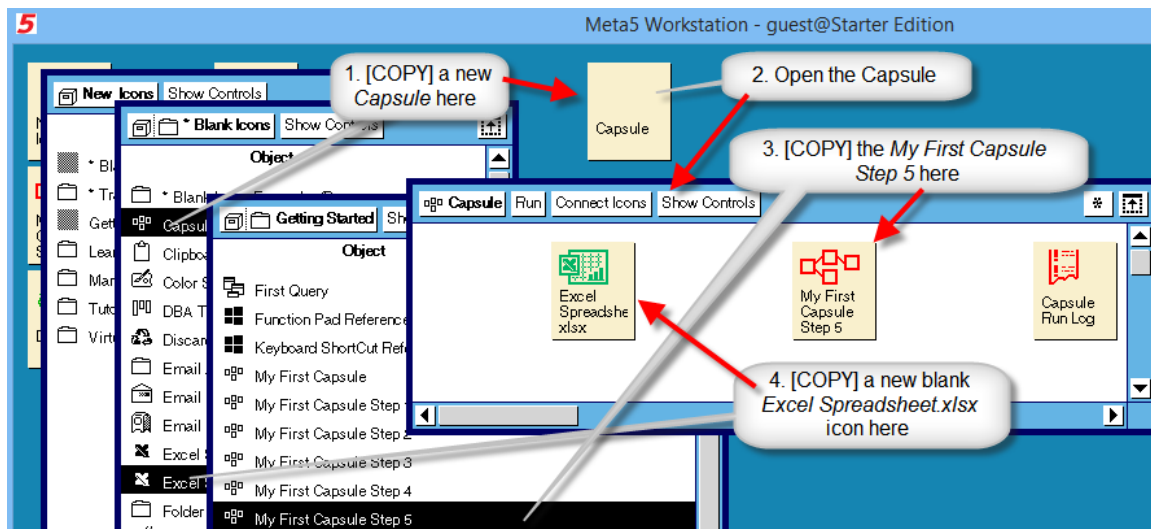
This example shows how @A is used in many different places in this Capsule. NOTE: You can use up to 256 variables simultaneously to create very elaborate Capsule applications. Please refer to the *Capsule* user guide to expand your knowledge of how @variables and regions are used to pass values and data from icon to icon.

Iterating Capsules, how to run Capsules over and over

[Click for Video – Capsule Step 6 \(Iteration, running Capsules over and over\)](#)

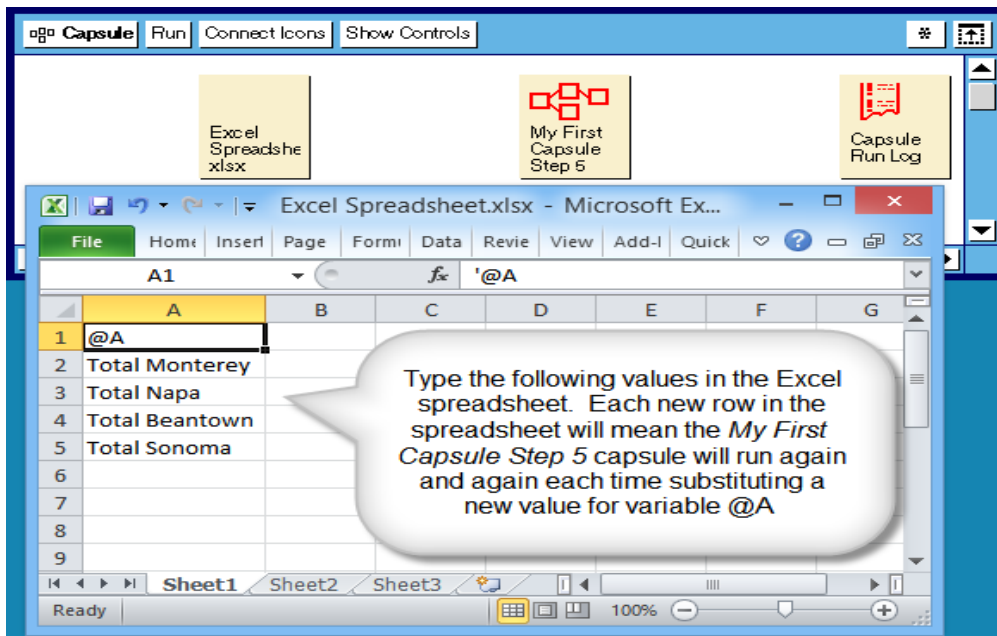
One of the reasons the Meta5 tool is so powerful, is because it automates the cutting and pasting of data. You can build an application that produces a report for one set of variables, and then run it again and again for other sets of variables. You can setup iteration to create the reports automatically without having to manually change the variables for each run. The list of variables can be stored in a spreadsheet or fed from the Query tool. This section will show you how to create iterating Capsules that run over and over to create an unlimited number of reports.

Let's continue using the Capsule example from above to show how iteration works. First [COPY] a new *Capsule* located in the ** New Icons* Blank Icons* Folder to you desktop, open the *Capsule*. Now [COPY] the *My First Capsule Step 5 Capsule* located in the ** New Icons\Getting Started* Folder into the new *Capsule*. Now [COPY] a new Excel spreadsheet.xlsx icon located in ** New Icons* Blank Icons* Folder to the left of the *My First Capsule Step 5 Capsule* as shown below.

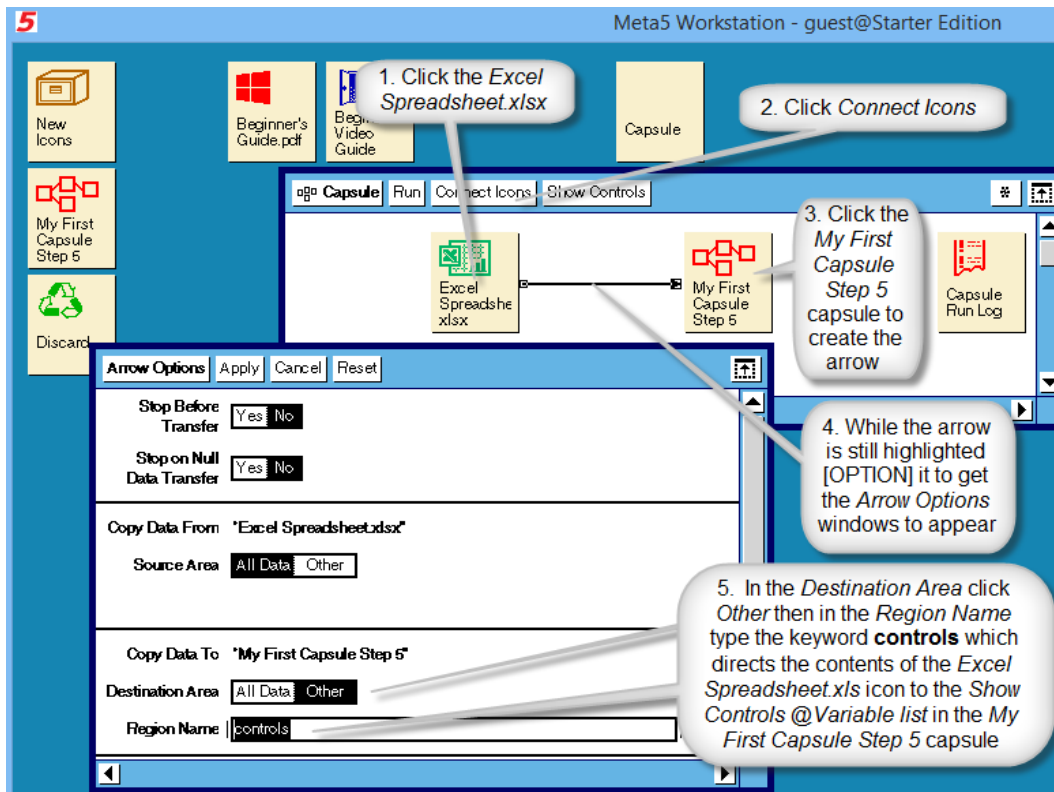


Next we need to create the list of values we want the My First Capsule Step 5 to run for. Each new value will mean a separate run of the My First Capsule Step 5. We can create the list in Excel so open up the Excel Spreadsheet.xls icon and type the following values in the following cells a1 = '@A, a2 = Total Monterey, a3 = Total Napa, a4 = Total Beantown, a5 = Total Sonoma. See below;

NOTE: For cell a1 you will need to type in an apostrophe '@A so Excel knows it's a text field.

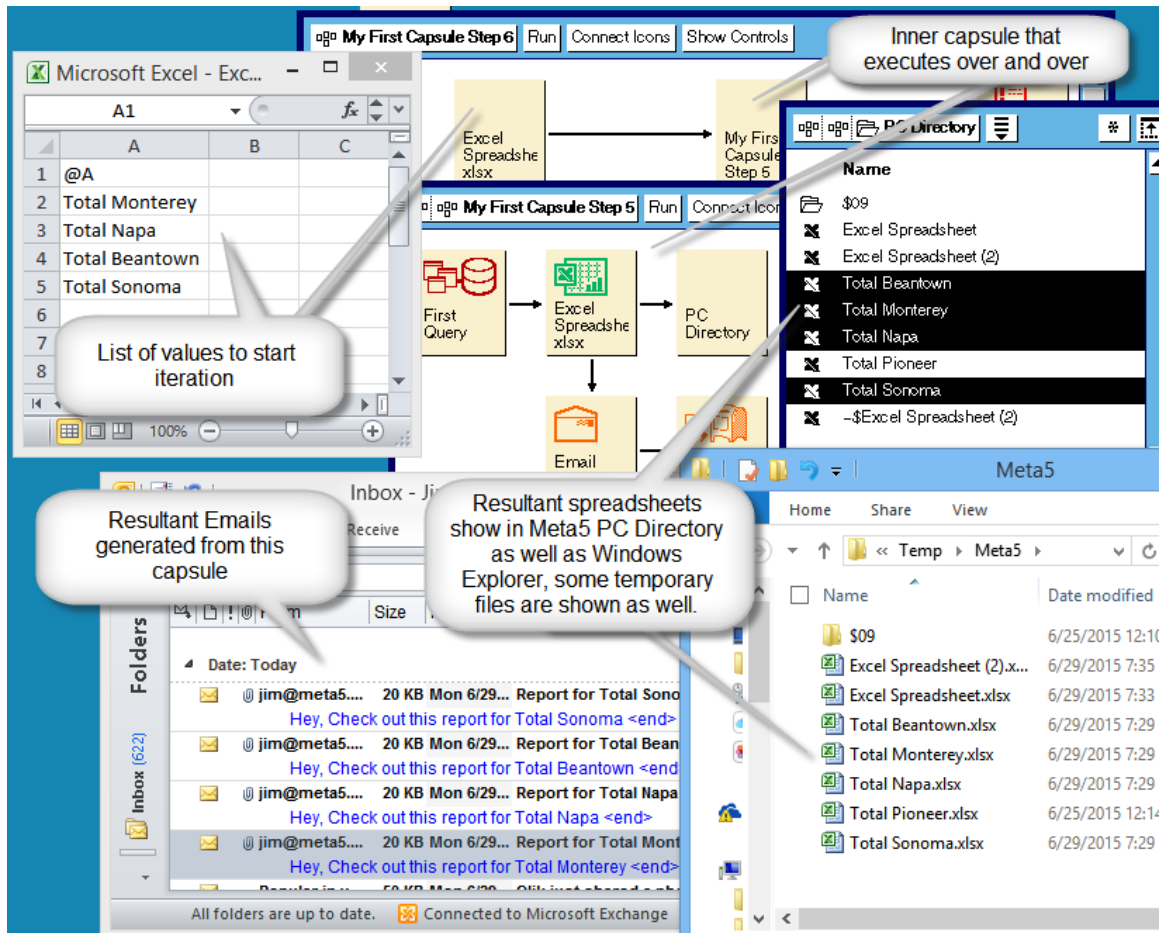


Next we need to create an arrow from the *Excel Spreadsheet.xlsx* icon to the *My First Capsule Step 5* Capsule, but this time we need to set the arrow *Destination Area* to *Other* then type in a key word called **controls**. See the below picture.



After setting the arrow close the *Capsule* and rename it by [OPTION]ing it (*F4* or *Alt-Enter*). Rename the Capsule to *My First Capsule Step 6*. Open and run the Capsule. See the results from this Capsule.

Note: If the list in Excel was longer it would create a new report for each row of values in the Excel spreadsheet.



You are now finished with the Beginner's Guide. This guide was meant to give you an idea of the power of the Meta5 platform. It is only an introduction and we encourage you to learn more about the unique powerful integration and reporting capabilities of Meta5 and to learn how to execute other windows applications within Meta5 or learn how to integrate Word and Excel within Meta5. Also learn how to extract data from the web to be fed into Meta5 Capsules. Feel free to look through the *New Icons* file drawer for examples, tutorials, videos and documentation. Also feel free to visit our website at www.Meta5.com for more information or call (888) Meta-555 to talk to our sales staff or consulting professionals if you should have any questions.

Finding more information and expanding your knowledge of Meta5

[Click for Video – Where to go to find more information on Meta5](#)

NOTE (This final section is not yet completed)

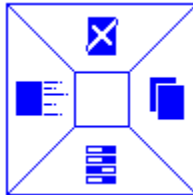
There are many resources available that will help you expand your knowledge of Meta5.

Find more information about Meta5 including where to find;

- **Meta5 Manuals and Documentation**
- **Different types of finished Capsules applications (Learn by example)**
- **Meta5 Instructional Video's**
- **Meta5 Self-Paced Tutorials**
- **Virtual Classroom Training**

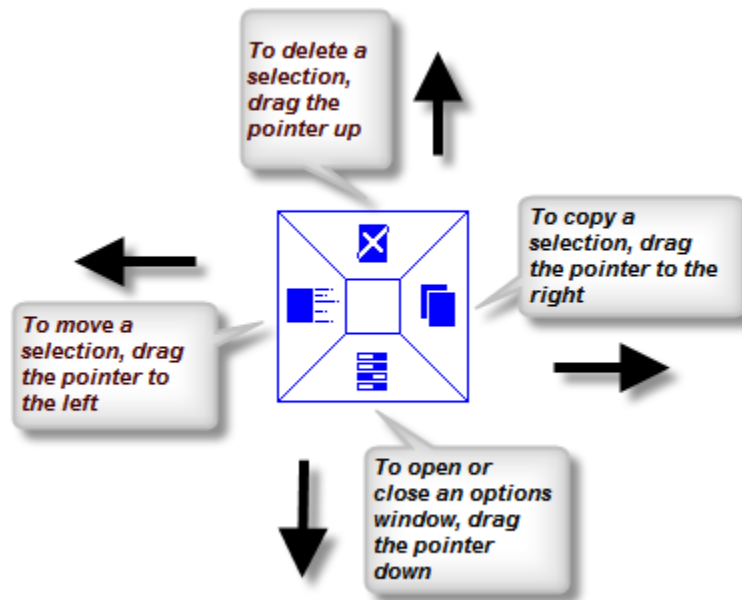
APPENDIX A **(Meta5 Pop-Up Function Pad)**

The pop up function pad is used as a quick way to invoke the [COPY], [MOVE], [DELETE] and [OPTIONS] commands.

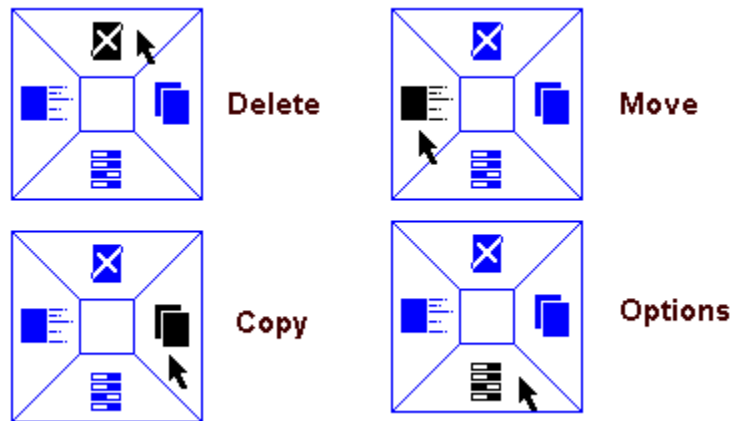


You can activate the pop-up function pad by pressing and holding both mouse buttons, but be sure to remember to [SELECT] the icon first then activate the pop-up function pad. The pop-up function pad will continue to appear on the screen for as long as you continue to press both mouse buttons.

Now to invoke any of the four functions, while the function pad is displaying, keep pressing both mouse buttons and move your mouse to the function you want.



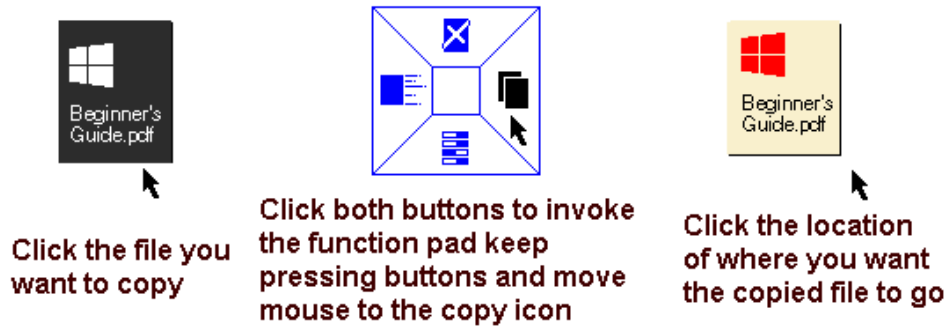
[SELECT] the icon you want to work on, activate the function pad, with both buttons, hold them down and then move your mouse for the desired operation.



NOTE: The Copy and Move functions require selecting a destination to copy to. This can be done by clicking the mouse at the desired destination location after you have selected Copy or Move.

FOR EXAMPLE:

How to copy an Icon file










APPENDIX B (Keyboard Functions and Keystroke Shortcuts)






<u>Key</u>	<u>Function</u>
F2 [MOVE]	Same function as Move on the pop-up function pad.
F3 [COPY]	Same function as Copy on the pop-up function pad.
F4 [OPTIONS]	Same function as Options on the pop-up function pad.
F5 [DELETE]	Same function as Delete on the pop-up function pad. NOTE: The Delete key on your keyboard will also work the same as F5 [DELETE].
F1 [HELP]	Displays and opens our documentation.
F8 [SIZE]	Opens an icon or changes the size of open windows.
F9 [STOP]	Terminates a Capsule, Query or SQL Entry process. NOTE: F9 [STOP] is very important as a way to interrupt queries or Capsules that you want to stop.
<u>Keystroke</u>	<u>Shortcut</u>
ALT+ENTER	Option the currently selected icon or item.
ARROW KEYS	Navigates the icons on the Meta5 Desktop and within Capsules. Arrow keys will also scroll through the choices on the System Menu and steps though items within containers
CTRL+A	Select all items or text.
CTRL+C	Copy selected items.
CTRL+DOWN ARROW	Page down.
CTRL+F4	Closes the currently selected window. If a menu is open, it will execute the selected Item.
CTRL+INSERT	Copy items.
CTRL+LEFT ARROW	Page left.




<u>Keystroke</u>	<u>Shortcut</u>
CTRL+RIGHT-ARROW	Page right.
CTRL+TAB	Toggles through all open windows on the Meta5 Desktop.
CTRL+UP ARROW	Page up.
CTRL+V	Paste items.
CTRL+X	Cut/move selected items.
ENTER	Opens the currently selected icon on the Meta5 Desktop. If a menu is open, it will execute the selected item.
ESCAPE	Cancels icon selection on the Meta5 Desktop or deselects the currently selected item on the system menu or container.
MENU	Activates or deactivates the [*] button of the active application window. If a window is not active. It will activate the system menu of the desktop [*] button. If a menu is open, it will execute the selected item.
CTRL+WINDOWS	Toggles through all open windows on the Meta5 desktop.
SHIFT+DELETE	Cut/move selected items.
SHIFT+INSERT	Past items.
CTRL+DRAG	Using the left mouse button along with the CTRL key will copy (not move) the selected icon(s).

APPENDIX C Touch Navigation (*when icons are closed*)

Function	Touch Input (<i>mouse/keyboard equivalent</i>)	
<ul style="list-style-type: none"> • [SELECT] an icon • [DESELECT] an icon 	To [SELECT] an icon, tap the icon once. <i>Left mouse click</i> To [DESELECT] the icon, tap on an empty space on your desktop once. <i>Left mouse click</i>	
<ul style="list-style-type: none"> • [OPEN] an icon 	First, make the selection of the icon you want opened by tapping once on the icon [SELECT] Then, tap the icon a second time. <i>Double left click on mouse.</i>	
<ul style="list-style-type: none"> • [OPEN] an icon (stretch) 	Once an icon is [SELECT]ed, pinch out with two fingers to open. <i>F8 [SIZE].</i>	
<ul style="list-style-type: none"> • [EXTEND] Selection 	Once an icon is [SELECT]ed, then [EXTEND] to another icon by touching the next icon and then tap with a second finger. Repeat for all icons to [EXTEND]. <i>Right click on mouse</i>	
<ul style="list-style-type: none"> • [EXTEND] Selection 	Once an icon is [SELECT]ed, then [EXTEND] to another icon by touching the next icon and hold until a square appears, then let go. Repeat for all icons to [EXTEND]. <i>Right click on mouse</i>	
<ul style="list-style-type: none"> • Display Function Pad 	Once an icon is [SELECT]ed, invoke Function Pad by tapping an open space on your desktop, with both fingers at the same time. <i>Left and Right click on mouse simultaneously</i>	
<ul style="list-style-type: none"> • [MOVE] an icon on the Desktop 	Tap and hold finger on icon to be moved and then drag icon to desired location and let go. <i>Left click and drag on mouse</i>	

Touch Navigation *(when icons are open)*

Function	Touch Input <i>(mouse/keyboard equivalent)</i>	
<ul style="list-style-type: none"> • Re-[SIZE] an Open icon (3 step most control) 	<ol style="list-style-type: none"> 1. Tap the open window header 2. Pinch-out within the open window (to invoke [SIZE]ing, NOTICE: Sizing message in Message Bar) 3. Tap, hold and release to set desired window size. <p><i>Left mouse click on header and press F8 [SIZE], select and drag to desired location.</i></p>	
<ul style="list-style-type: none"> • Re-[SIZE] an Open icon (be precise) 	<p>Tap and hold on window edge and move to desired location. NOTE: you must [SELECT] window edge very precisely.</p> <p><i>Left mouse click on edge of window, hold and drag to desired size</i></p>	
<ul style="list-style-type: none"> • [MOVE] an Open icon (most control) 	<p>Tap twice quickly on open window header. Continue to hold from second tap and drag to desired location and release. <i>Left mouse click on window header and press F2 [MOVE], select and drag to desired location</i></p>	
<ul style="list-style-type: none"> • [MOVE] an Open icon (be precise) 	<p>Tap the open window header, continue to hold from the tap and drag to desired location and release. NOTE: you must be tap in the middle of the window header <i>Left mouse click and hold on window header and move to desired location</i></p>	
<ul style="list-style-type: none"> • Scroll Contents within Icon 	<p>Press and hold two fingers within the open window, while holding fingers down, drag in the direction you wish to scroll and release at the desired location.</p> <p><i>Left click and drag scroll bars on window</i></p>	

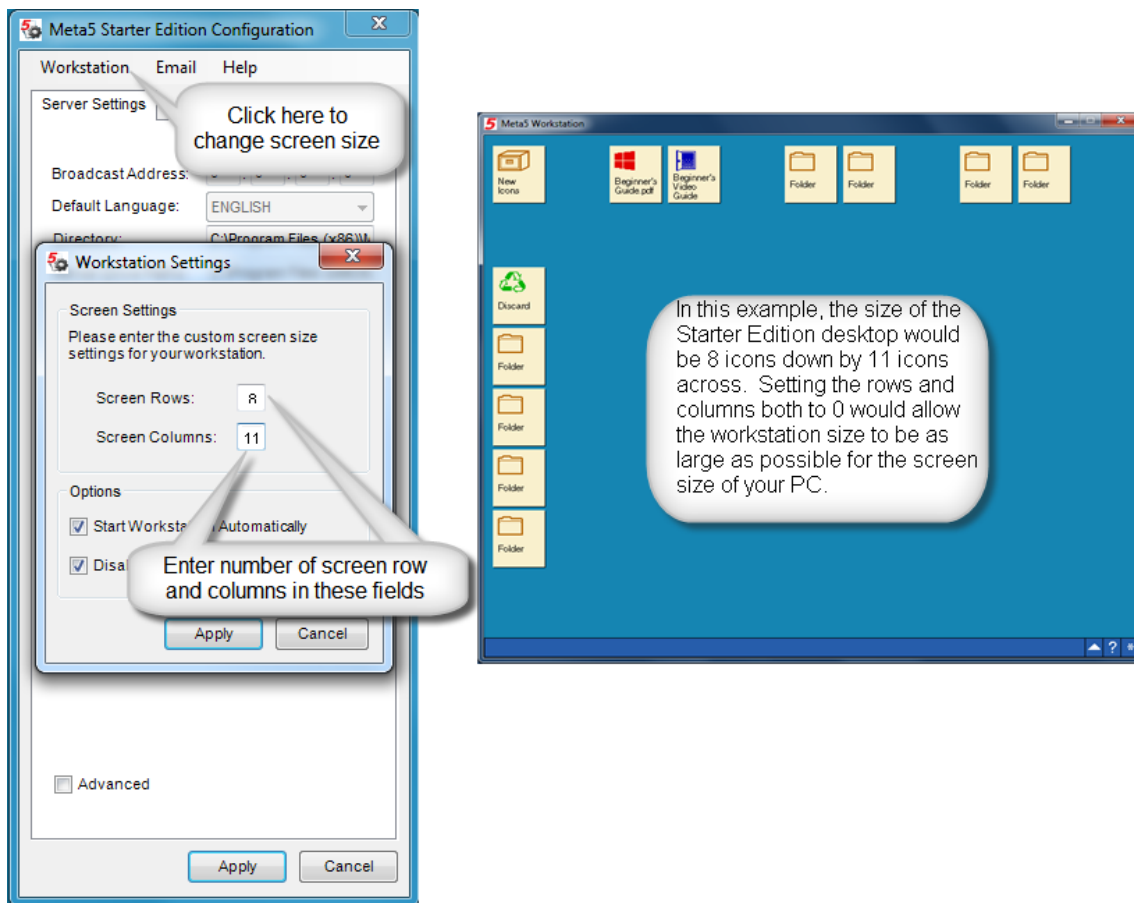
<ul style="list-style-type: none">• To Cancel a Move/Size Operation	<p>Swipe two fingers in any direction on the desktop to cancel a Copy or Move operation. <i>Left mouse click on blank part of desktop, deselect.</i></p>	
<ul style="list-style-type: none">• To [STOP] a Capsule or Query process.	<p>Swipe two fingers in any direction on the desktop while process is running. <i>F9 [STOP].</i></p>	
<ul style="list-style-type: none">• Close an Icon	<p>Pinch two fingers together inside the open Icon. <i>Left mouse click the name of the icon in the window header.</i></p>	

APPENDIX D

Configuring the window size of your Meta5 Desktop on your PC

You can change the default window screen size of your Meta5 desktop as you like. To change the screen size you must use the *Meta5 configuration tool*. You can access the Meta5 configuration tool by right clicking the *Meta5 Start Center* white icon in the Windows notification area in the lower right hand corner of your Windows task bar and choosing *Configure Meta5 Start Center*.

After the Meta5 Starter Edition Configuration tool launches select the *Workstation* tab.



Enter the number of screen columns and rows that you would want your Meta5 desktop to occupy.

The number of screen rows is represented by the number of icons that can fit within the Meta5 window vertically (up and down) and the number of columns are represented by the number of icons that can fit horizontally (side to side).

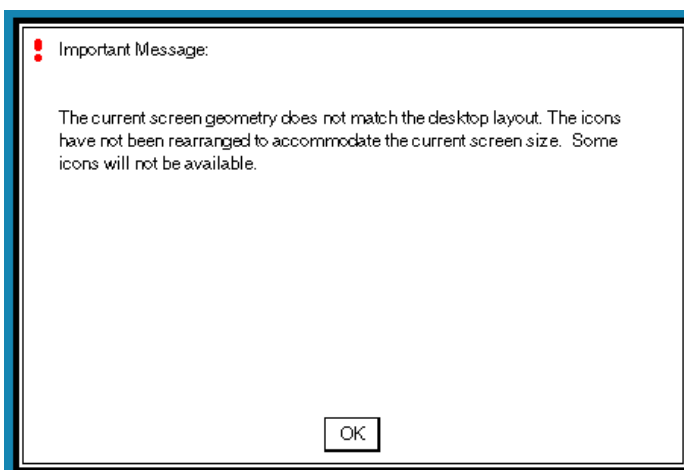
By default you will see the Meta5 rows and columns being set to 0. This configuration will give you the maximum amount of rows and columns to fit within the screen size of your PC. For example a PC screen size of 1920 x 1080 resolution will show 11 rows and 25 columns of Meta5 Icons; whereas a PC screen size set to 1024 x 768 resolution will show 8 rows and 13 columns of Meta5 icons.

If you like the Meta5 screen size to always maximize, then keep the setting of rows and columns to 0, but if you want more control of how your meta5 desktop appears select a row and column setting that works for you.

Click 'Apply' in the *Screen Settings* window as well as clicking 'Apply' in the *Meta5 Configuration* window.

NOTE: The Meta5 Starter Edition will need to be restarted for the size change to take effect.

**NOTE: If you are working on a larger screen and utilize the full Meta5 desktop by placing icons throughout the desktop you may run into some trouble if you then decide to shrink your desktop size. You may see a message that all of your icons cannot be shown.



To correct this go back to your original large screen size and move all your icons to the top left corner of the desktop by the number of rows and columns you will be shrinking to, leaving the excess Meta5 desktop area void of icons. Now, if you shrink your screen size all icons will be visible again.