Multiple Currencies

Generally

Multiple Currencies is a process of defining which currency applies to each resource. You may for example have a project which needs to purchase off-shore components from various countries mixed with local resources.

The process involves adding additional columns (described later) to your Resource Library to accept:

- the currency name (e.g. BAHT, AUD, USD, etc) = 'CURR/N'
- the resource procurement rate expressed in the foreign currency = 'PURCH/P'
- the current currency exchange rate, normally relative to the Bid Currency = 'EX RATE'
- a formula in the RATE column which multiplies the exchange rate x the procurement rate, thus
- expressing the resource in Bid Currency

Note: The respective columns must be named CURR/N, PURCH/P, EX RATE.

The following window illustrates an example of such a Resource Library:

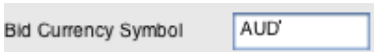
RC	CC	DESCRIPTION	UNIT	RATE F	CURR/N	PURCH/P	EX RATE
		LABOUR RESOURCES					
LACARP	LA	Carpenter	mhrs	40.00	AUD	40.00	1.000000
LACONC	LA	Concretor	mhrs	38.00	AUD	38.00	1.000000
LASS	LA	Steel rigger	mhrs	45.00	AUD	45.00	1.000000
		MATERIALS					
MACOMPRJ1234	MA	Compressor model J1234	No	1,152.00	JPN	60,000.00	0.019200
MASGSTER40	MA	40 litre surgical sterilizer	No	2,163.11	EUR	1,350.00	1.602300
MARBY16	MA	16 dia Y grade Rebar	t	2,000.00	AUD	2,000.00	1.000000

Each resource is then used in the estimate as normal. However, if you do add new resources from within a rate/cost workup sheet, you will need to edit the resource library and add the extra details in.

Maintaining the Exchange Rates

Initially you may not have defined the exchange rates for this Project, you have used plugged exchange rates, or you may be at the end of the Project and need to change these rates to their final value.

This is done as follows:

1. Click the MORE... button in the Project Window
2. Enter the Bid Currency Symbol 

3. Click the Define Currencies button
4. Fill out the Exchange Rate dialog. An example is shown below:

5.Click the ‘Is Bid Currency’ button adjacent the Bid Currency
6.Click Accept
7.Click Accept Changes in the ‘Editing More Project Defaults’

What we have done and only done here, is ‘define’ the currency exchange rates. These have not yet flowed through the project until we execute the option ‘Project->Recalculate’.

Applying the New Exchange Rates

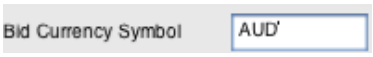
Applying these new exchange rates is the same principle as applying changes made in the Resource Library to resources. The Project must be Recalculated.

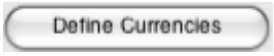
Changing the Bid Currency

Changing the Bid Currency is very easy:

1.Click the 

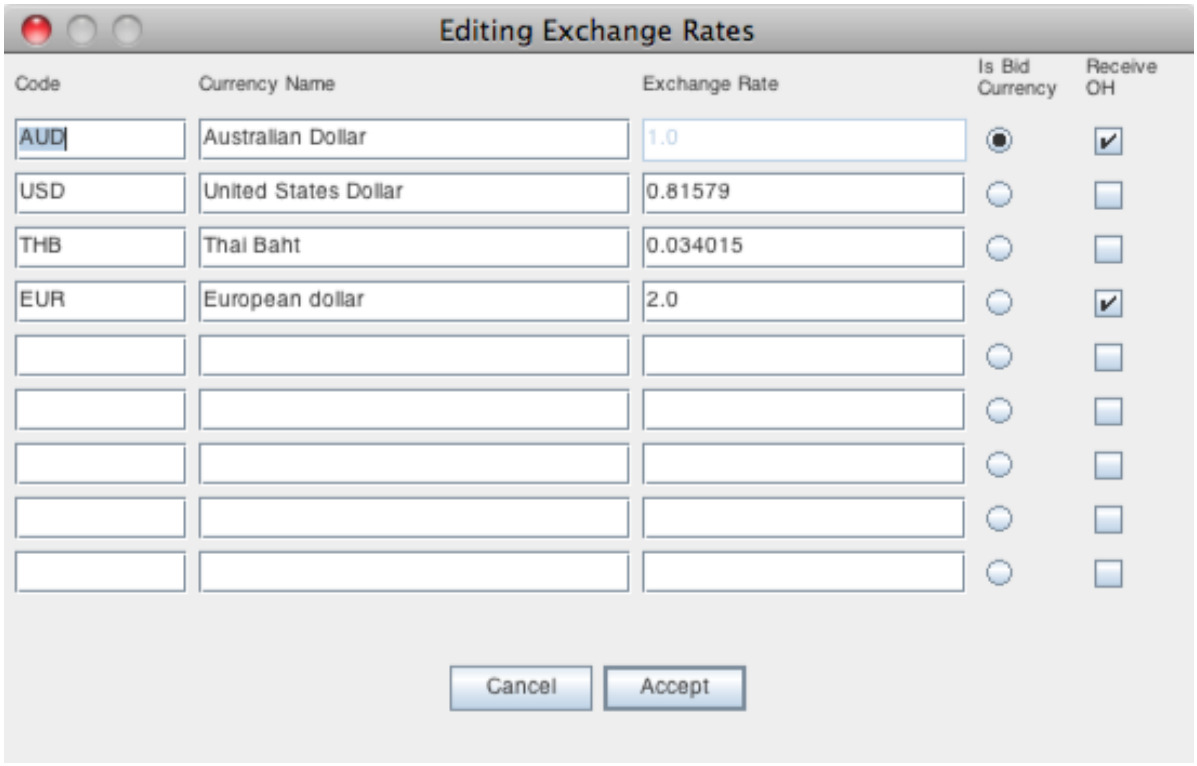
button in the Project Window

2.Change the Bid Currency Symbol 

3.Click the 

button

4.Click the ‘Is Bid Currency’ button adjacent the new Bid Currency, and all Exchange Rates will automatically be changed pro-rata the new Exchange Rate



5.Click Accept
6.Click Accept Changes in the ‘Editing More Project Defaults’
7.Recalculate the Project to reflect the changes in the Estimate

Reports

When you print the Resource Usage Report, the last page of the report will include the aggregated cost of each of the currencies, as shown below:

Totals of All CURRENCIES

PROJECT:A Standard Project

SubTitle:

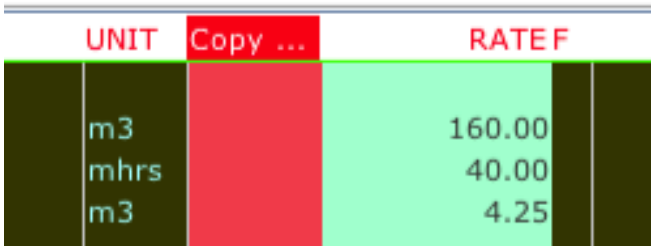
E:Wed Feb 27 15:22:22 EST 2008

CODE	CURRENCY NAME	PURCHASE PRICE	EXCHANGE	ESTIMATED COST
AUD	Australian Dollar	7,150	0.90000100	6,435
YEN	Japanese Yen	600,000	0.01728000	10,368
EUR	Euro Dollar	6,750	1.48500100	10,024
USD	US Dollar		1.00000000	
			0.90000100	
	Undefined			

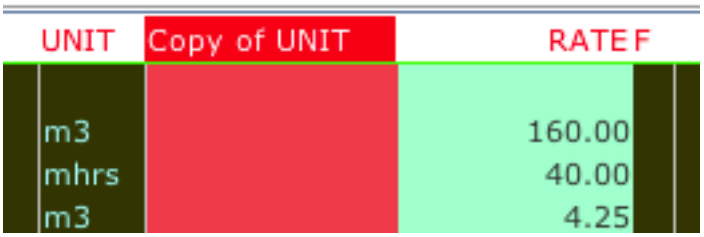
Adding Additional Columns

Execute these next steps to add the additional columns mentioned previously:

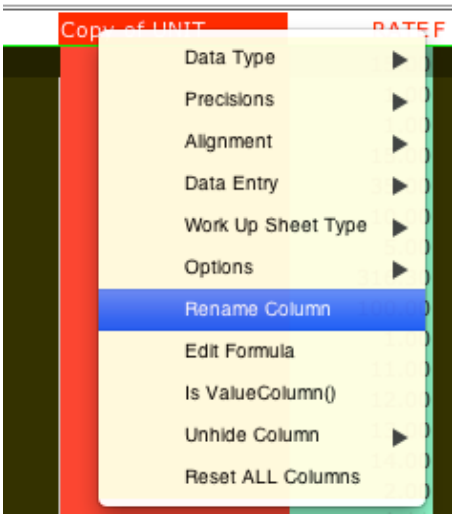
1. Edit the Resource Library
   The following steps will ADD the 'CURR/N' column
2. Click on any cell in the UNIT column
   When we add a new column to a worksheet, we do this by 'duplicating' an existing column. We therefore pick an existing column that matches, by type, as close as possible to the column we are going to add. In this case the UNIT column because it is a text column with no formula.
3. Right click on the cell in the UNIT column and select the 'Add Column' option from the popup
   This duplicates the UNIT column and gives it the title 'Copy of UNIT' as depicted below



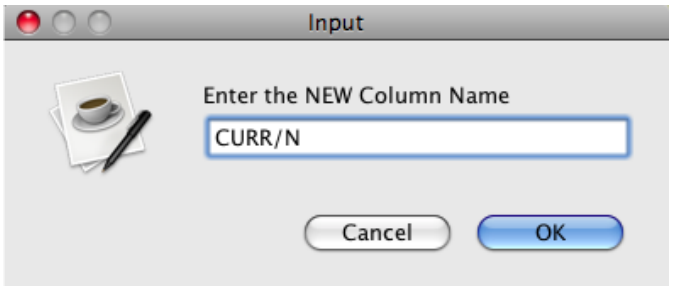
4. Place your mouse on the boundary between this new column and the RATE column
   The cursor changes to depict the 'column resize' cursor
5. While the 'column resize' cursor is shown, press the mouse button and drag to the right/left so as to widen the column



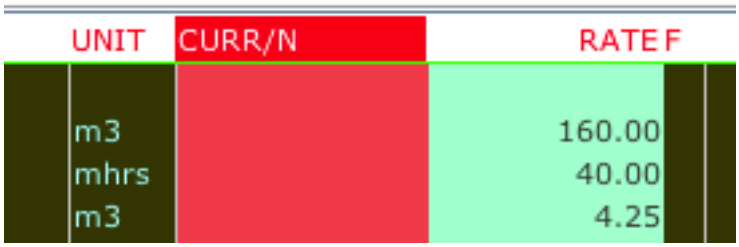
6. Right mouse click on the heading ‘Copy of UNIT’ and select the option ‘Rename Column’ from the popup



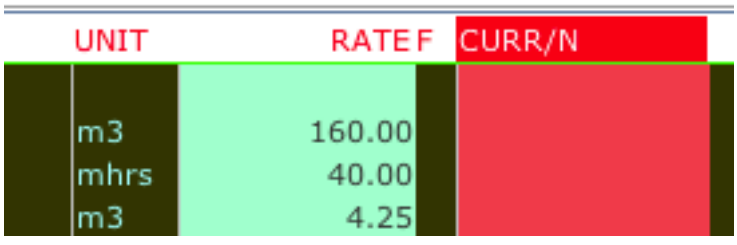
7. Enter the NEW Column Name as ‘CURR/N’



8. Our worksheet headings should now look like this:

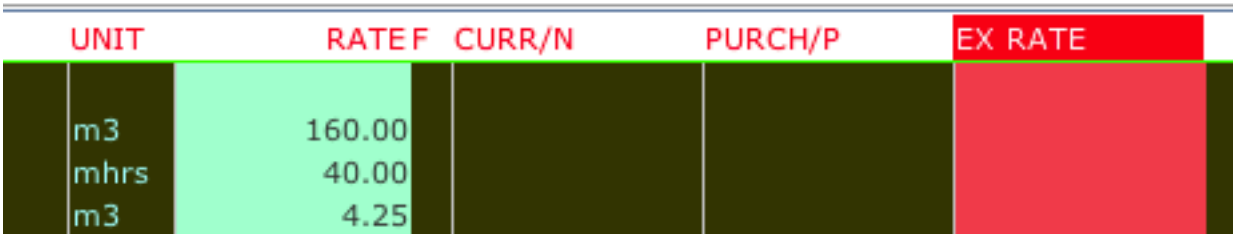


9. Move this ‘CURR/N’ column to a more appropriate place (after the ‘F’ column) by clicking on it’s heading and while holding the mouse button down, dragging it into position.
Our worksheet headings should now look like this:



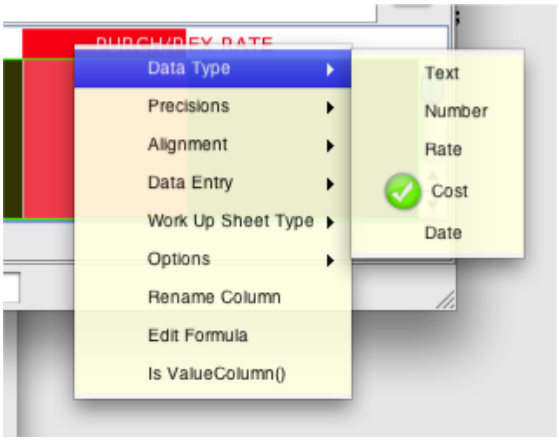
10. Repeat steps 2 through 7, but instead of UNIT as the source column, use the ‘CURR/N’ column, and rename this column to ‘PURCH/P’

11. Repeat step 10 to create the column ‘EX RATE’
    Our worksheet headings should now look like this:



    Since the ‘PURCH/P’ column will contain costs, we now need to modify the parameters for this column to accommodate. In other words we need to change it to show COST values;

12. Right mouse click on the heading PURCH/P, and select ‘Data Type’ then ‘Cost’ from the popup as shown here



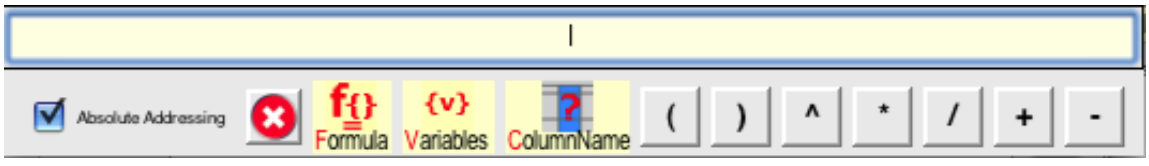
13. Now Right mouse click on the heading again and select ‘Alignment’ then ‘Right’ from the popup

14. The ‘EX RATE’ column is different - we leave it as ‘Data Type’ = ‘Text’ even though it will contain a number so that we can enter varying precision numbers like 2.123, 0.123456789, etc.

15. The last thing we need to do is now enter the FORMULA for the ‘RATE’ column so that it is the result of ‘PURCH/P’ x ‘EX RATE’ **IF** the ‘PURCH/P’ is not zero. The **IF** condition allows us to enter bid currency RATEs directly into the RATE column. This can be accomplished by the following formula:

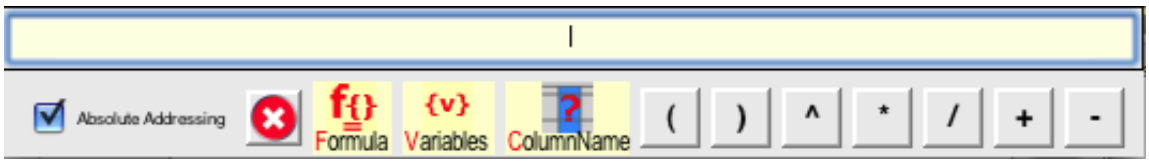
    @IF([PURCH/P]*[EX RATE],[PURCH/P]*[EX RATE],[RATE])

    We enter the above formula in one of two ways:
    1.typing it directly in
        Right mouse click on the ‘RATE’ heading and select ‘Edit Formula’
        The following is displayed:



        Type ‘@IF([PURCH/P]*[EX RATE],[PURCH/P]*[EX RATE],[RATE])’ in directly and click the button to finish

    2.using special functions
        Right mouse click on the ‘RATE’ heading and select ‘Edit Formula’
        The following is displayed:



1. Click the 

button
    1. select the ‘IF’ option - this enters ‘IF(testValue,thenValue,elseValue)’ into the formula text box
2. double click the word ‘testValue’
3. press the ‘Delete’ key
4. click anywhere in the ‘PURCH/P’ column
5. click the ‘*’ button
6. click anywhere in the ‘EX RATE’ column
7. double click the word ‘thenValue’
8. press the ‘Delete’ key
9. click anywhere in the ‘PURCH/P’ column
10. click the ‘*’ button
11. click anywhere in the ‘EX RATE’ column
12. double click the word ‘elseValue’
13. press the ‘Delete’ key
14. click anywhere in the ‘RATE’ column
15. check that the resultant formula matches
    @IF([PURCH/P]*[EX RATE],[PURCH/P]*[EX RATE],[RATE])
16. click the  button to finish

We have now completed adding the required columns.

Test the working of the sheet by:
1. Entering a RATE - it should remain as entered
2. Entering a PURCH/P and then an EX RATE - the RATE should = PURCH/P x EX RATE
3. Modify the formula for the RATE if it doesn’t

Considerations

You use Currencies in a Project by adding/having the columns CURR/N, PURCH/P, EX RATE in the Resource Library.

If this is the case, then every Resource needs to have a CURR/N and PURCH/P entry for each non-composite Resource so as to make the process work correctly. If you do not follow this rule, then when you go to Print/Recalculate the Project, an error report will be produced accordingly.

You can override this Currency Check by clicking on the Project MORE button, selecting ‘Define Currencies’, then turning the option ‘Ignore Currencies’ ON.