

Scripting How-To: Efficiently Adding Drawing Objects

The main object in the layout is a DrawingObject. Due to the way the collection works vast efficiency differences can be seen when accessing it in different ways. Consider the following two code examples (the second one runs 10x faster).

```
' Code Module
' Slow code
Sub Main
    Dim lay As Layout
    Dim i As Integer
    Dim j As Integer
    Dim x As Double
    Dim y As Double

    Set lay = Project.Schematics("Schematic 1").Layout
    x = 0
    y = 0
    For i = 1 To 1000
        y = 0
        For j = 1 To 100
            lay.DrawingObjects.AddRectangle(x, y, 10e-6, 10e-6) 'this is getting DrawingObjects
from lay each loop iterations
            y = y + 10e-6
        Next j
        x = x + 10e-6
    Next i
End Sub

' Code Module
' Fast code - add shapes directly to the drawing objects collection
Sub Main
    Dim lay As Layout
    Dim drawObjs As DrawingObjects
    Dim i As Integer
    Dim j As Integer
    Dim x As Double
    Dim y As Double

    Set lay = Project.Schematics("Schematic 1").Layout
    ' Get direct reference to drawObjs collection.
    Set drawObjs = lay.DrawingObjects ' this get DrawingObject only once
    x = 0
    y = 0
    For i = 1 To 1000
        y = 0
        For j = 1 To 100
            ' Add directly to drawObjs collection holding reference
            drawObjs.AddRectangle(x, y, 10e-6, 10e-6)
            y = y + 10e-6
        Next j
        x = x + 10e-6
    Next i
End Sub
```