

Macro for Calculating Connectivities

Michael Bentlage

(Technical University Munich, Chair for Spatial Development)

This Macro is able to calculate city interlocks for 2335 cities and 499 firms. To make it run faster, you should minimize the ranges of the macro to the minimum according to your data. The expressions to change are marked below:

According to the number of cities its repetition represents 2335. Set this figure also to the minimum.

Sub city_inter_matrix()

Sheets.Add After:=Sheets(Sheets.Count)

Sheets(Sheets.Count).Name = "Matrix"

Sheets("Data").Select

Range("A2").Select

Range(Selection, Selection.End(xlDown)).Select

Selection.Copy

Sheets("Matrix").Select

Range("A2").Select

ActiveSheet.Paste

Range("B1").Select

Selection.PasteSpecial:cBTTC1 1 Tf-0.0004 Tc 0.0013 Tw 12 0 0 12 0.8 550.003 Tm(1ele

```

Selection.Borders(xlDiagonalUp).LineStyle = xlNone
With Selection.Borders(xlEdgeLeft)
    .LineStyle = xlContinuous
    .ColorIndex = 16
    .TintAndShade = 0
    .Weight = xlThin
End With
Selection.Borders(xlEdgeTop).LineStyle = xlNone
Selection.Borders(xlEdgeBottom).LineStyle = xlNone
With Selection.Borders(xlEdgeRight)
    .LineStyle = xlContinuous
    .ColorIndex = 16
    .TintAndShade = 0
    .Weight = xlThin
End With
Selection.Borders(xlInsideVertical).LineStyle = xlNone
Selection.Borders(xlInsideHorizontal).LineStyle = xlNone
ActiveCell.FormulaR1C1 = "Sum"
With ActiveCell.Characters(Start:=1, Length:=3).Font
    .Name = "Arial"
    .FontStyle = "Fett"
    .Size = 10
    .Strikethrough = False
    .Superscript = False
    .Subscript = False
    .OutlineFont = False
    .Shadow = False
    .Underline = xlUnderlineStyleNone
    .ColorIndex = xlAutomatic
    .TintAndShade = 0
    .ThemeFont = xlThemeFontNone
End With
Range("SG2").Select
ActiveCell.FormulaR1C1 = "=SUM(RC[-499]:RC[-1])"
Range("SG2").Select
Selection.AutoFill Destination:=Range("SG2:SG2336"), Type:=xlFillDefault
Range("SG2:SG2336").Select
Selection.Copy
Sheets("Matrix").Select
Range("B2").Select
Selection.PasteSpecial Paste:=xlPasteValues, Operation:=xlNone, SkipBlanks _
:=False, Transpose:=False
Range("B2").Select
Application.CutCopyMode = False
Selection.ClearContents
For x = 1 To 2335
    Sheets.Add After:=Sheets(Sheets.Count)
    Sheets(Sheets.Count).Name = "Calc"
    Sheets("Formula1").Select
    Cells.Select
    Application.CutCopyMode = False

```

```
Selection.Copy
Sheets("Calc").Select
Range("A1").Select
ActiveSheet.Paste
Range("B2").Select
Application.CutCopyMode = False
ActiveCell.FormulaLocal = "=Data!" & Cells(x + 2, 2).Address(x + 2, 0) &
"*Data!B2"
Range("B2").Select
Selection.AutoFill Destination:=Range("B2:SF2"), Type:=xlFillDefault
Range("B2:SF2").Select
Selection.AutoFill Destination:=Range("B2:SF2336"), Type:=xlFillDefault
Range("B2:SF2336").Select
Range("SG2").Select
Range(Selection, Selection.End(xlDown)).Select
Selection.Copy
Sheets("Matrix").Cells(2, x + 2).PasteSpecial Paste:=xlPasteValues,
Operation:=xlNone, SkipBlanks _
```