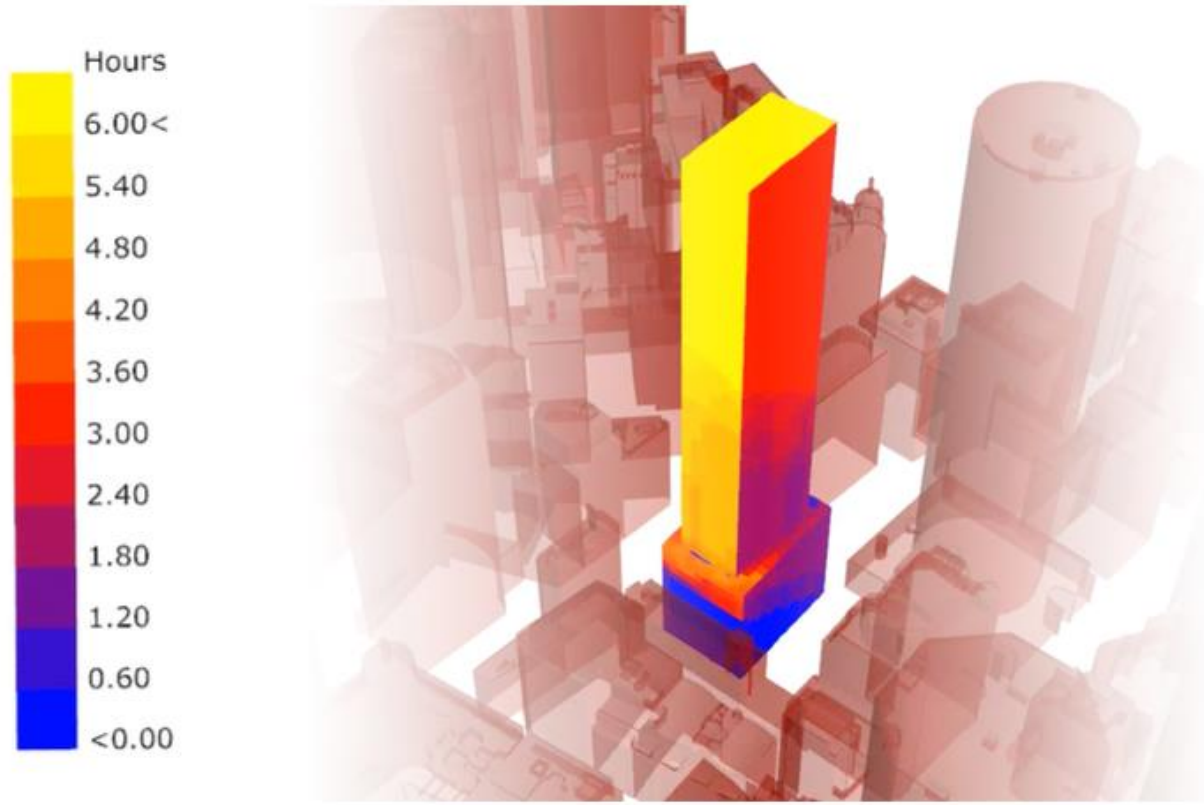

Sun Hour Analysis

Using Grasshopper, Part 1

First Grasshopper tutorial

Go easy on me…!

aussie BIM guru

Previously… in Revit/Dynamo

Sun Hour Analysis using Dynamo (Feasibility Part 9)

Aussie BIM Guru • 336 views • 1 month ago

In our last video we used **analysis** sensor grids to gauge view **analysis** from our feasibility massing. In this part we undertake a full ...

Refined Sun Hour Analysis using Dynamo (Feasibility Part 10)

Aussie BIM Guru • 187 views • 1 month ago

In our last video we generated a **sun hour analysis** study using Dynamo based on SEPP65 principles. In this part we refine our ...

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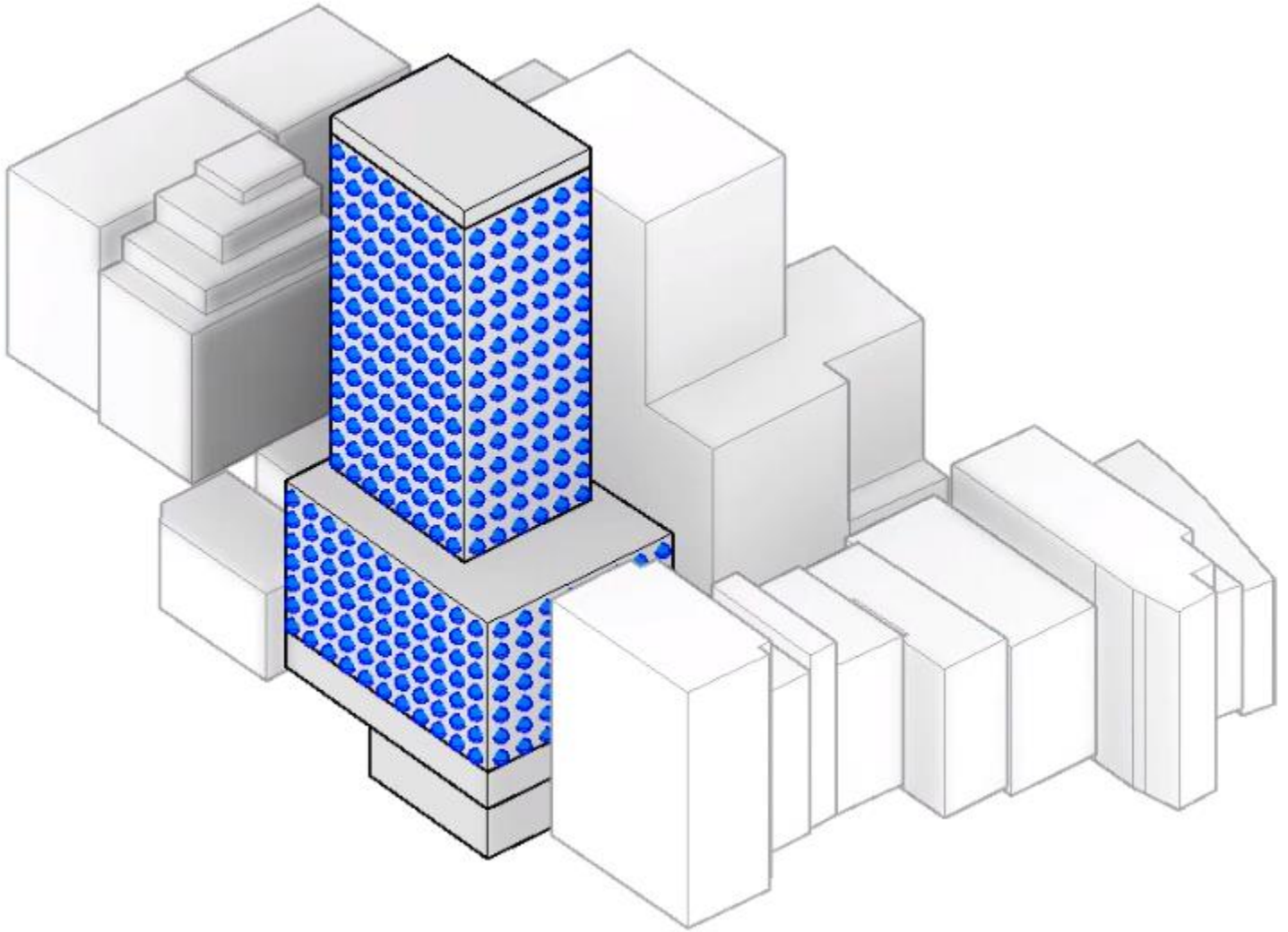

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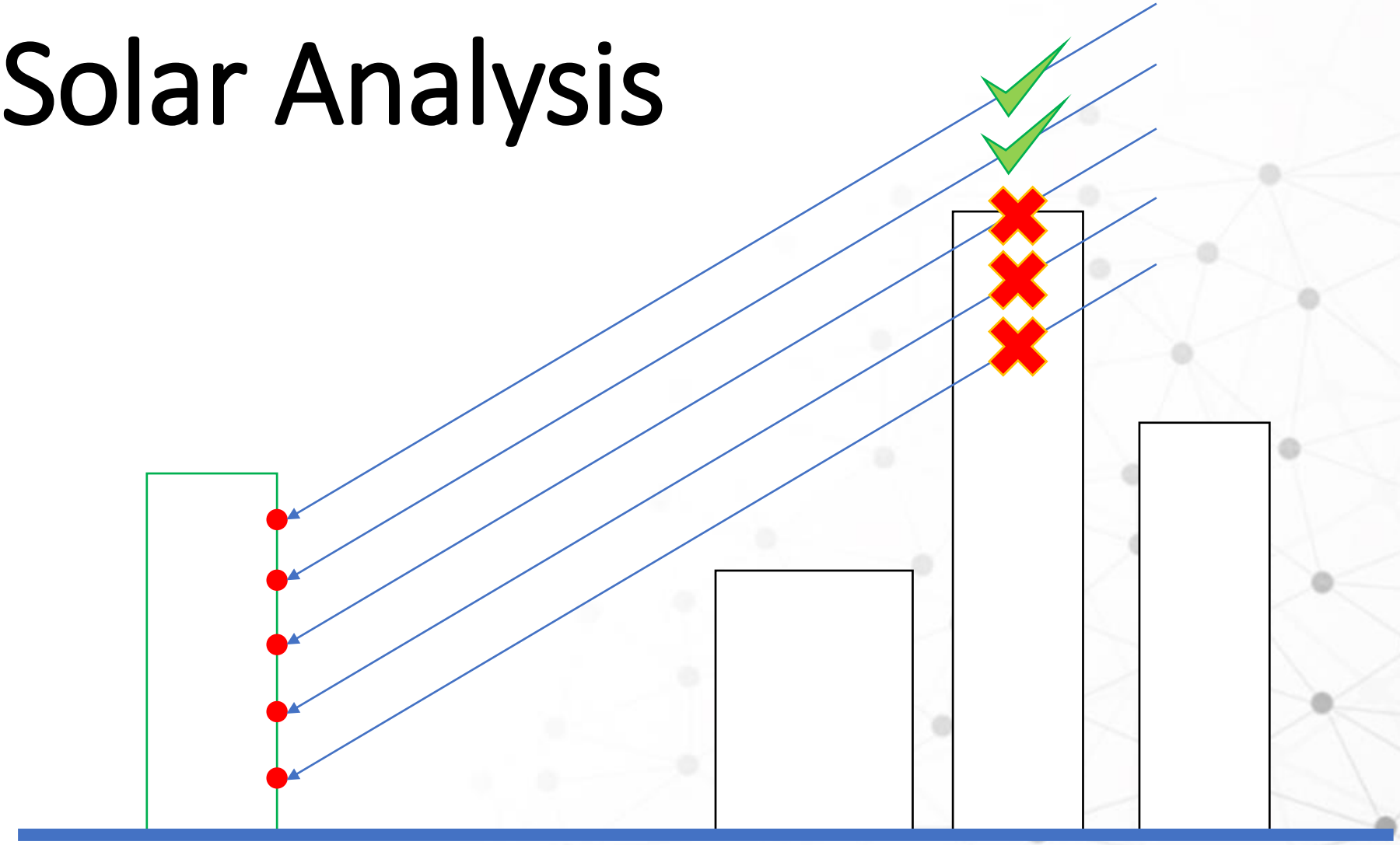
Solar Analysis



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Sun Hours – Huh?

Sydney requirement under *SEPP65*

Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas. (Objective 4A-1, p.79).

(Also a maximum of 15% receive 0 hours)

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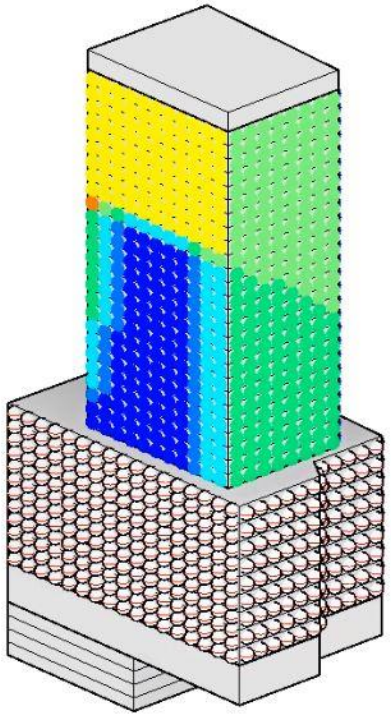

Name	Visibility	Projection/Surfac	
		Lines	Patterns
Detecors_Sun0	☑		
Detecors_Sun1	☑		
Detecors_Sun2	☑		
Detecors_Sun3	☑		
Detecors_Sun4	☑		
Detecors_Sun5	☑		
Detecors_Sun6	☑		
Detecors_Sun7	☑		

<SH By face>

A	B	C	D
ABG_Data_SunHou	ABG_Data_Count2	ABG_Data_Area2	%
East Tower			
0	3	38 m²	0.30%
1	2	26 m²	0.20%
2	23	294 m²	2.33%
3	180	2302 m²	18.22%
	208	2660 m²	21.05%
North Tower			
0	93	1115 m²	9.41%
1	30	360 m²	3.04%
2	50	600 m²	5.06%
3	10	120 m²	1.01%
4	3	36 m²	0.30%
5	1	12 m²	0.10%
7	99	1187 m²	10.02%
	286	3429 m²	28.95%
South Tower			
0	286	3390 m²	28.95%
	286	3390 m²	28.95%
West Tower			
3	105	1259 m²	10.63%
4	103	1235 m²	10.43%
	208	2494 m²	21.05%
988	988	11973 m²	100.00%

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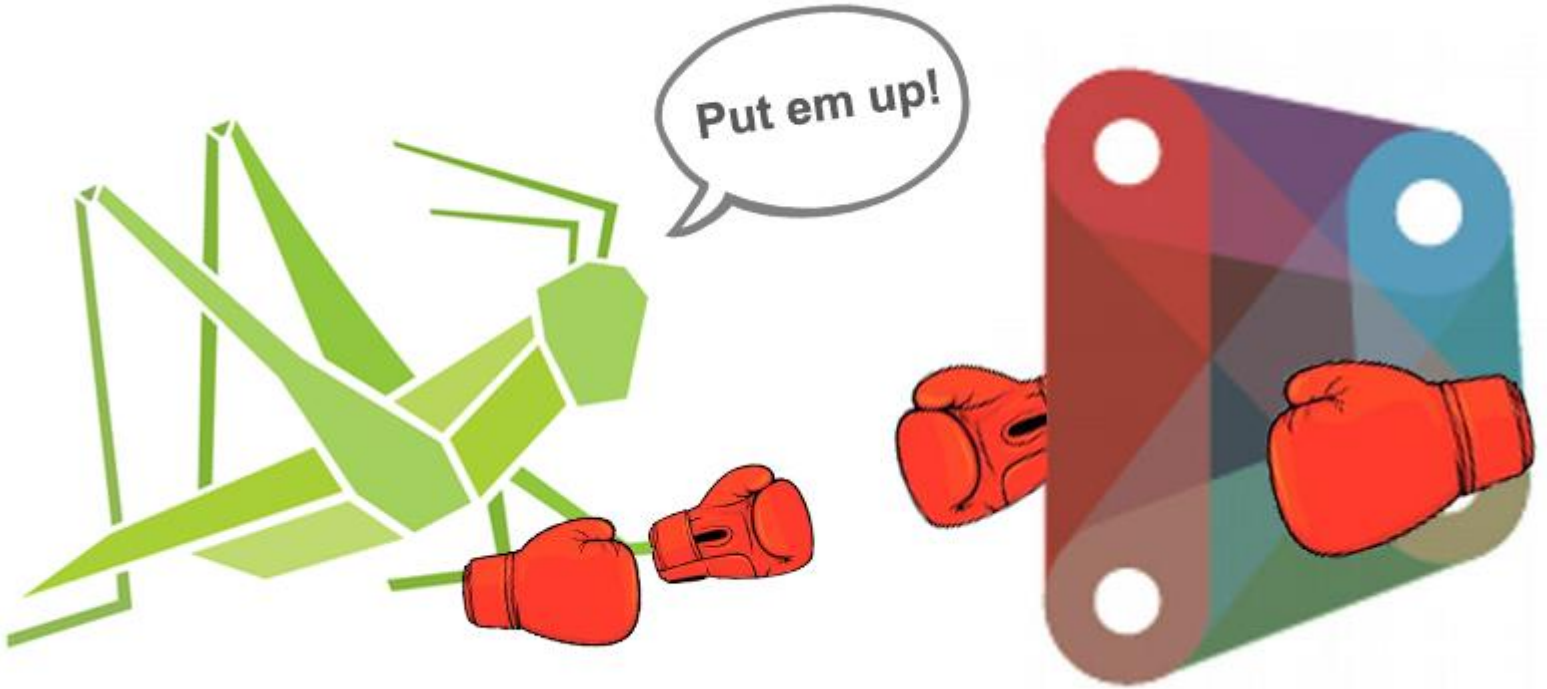

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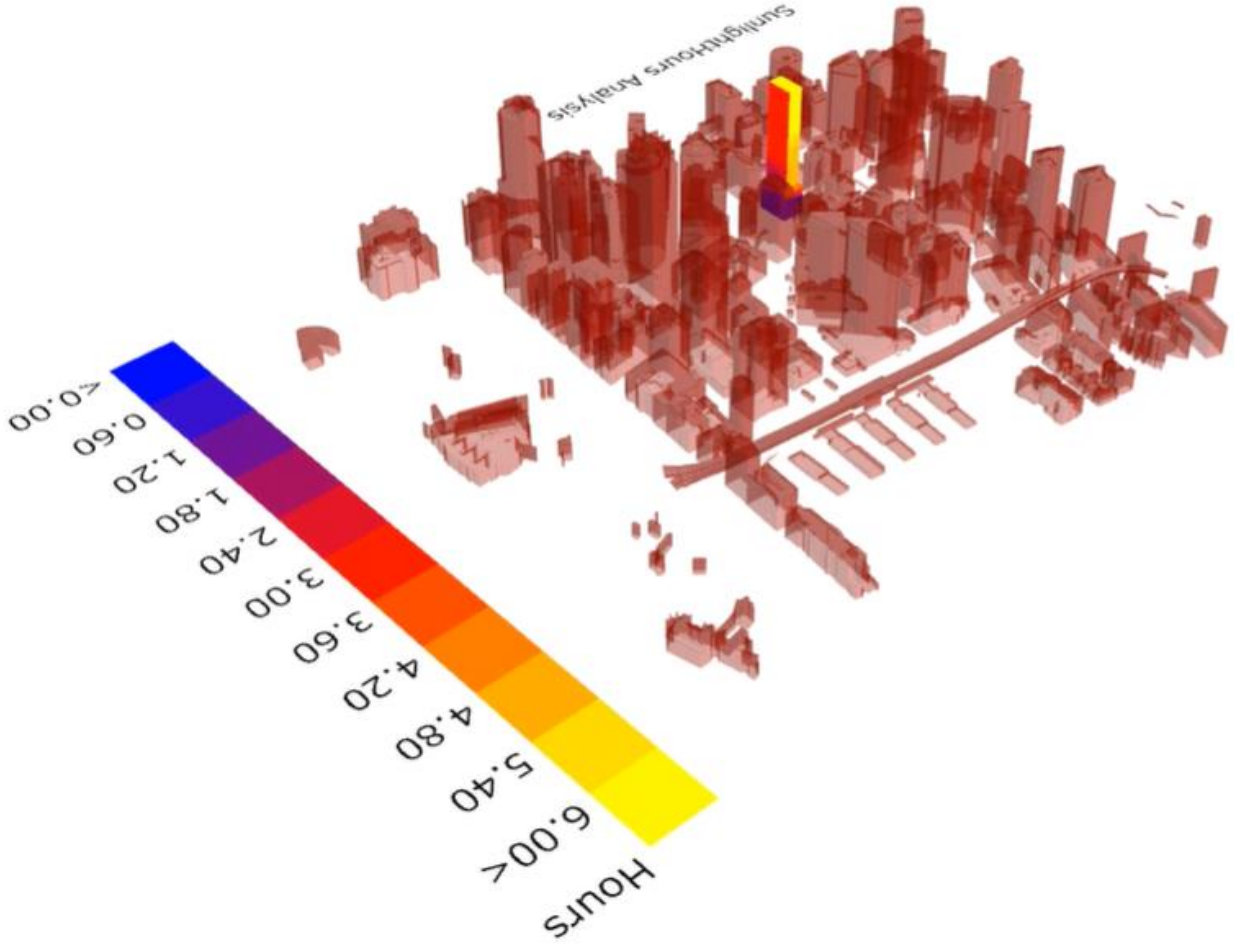

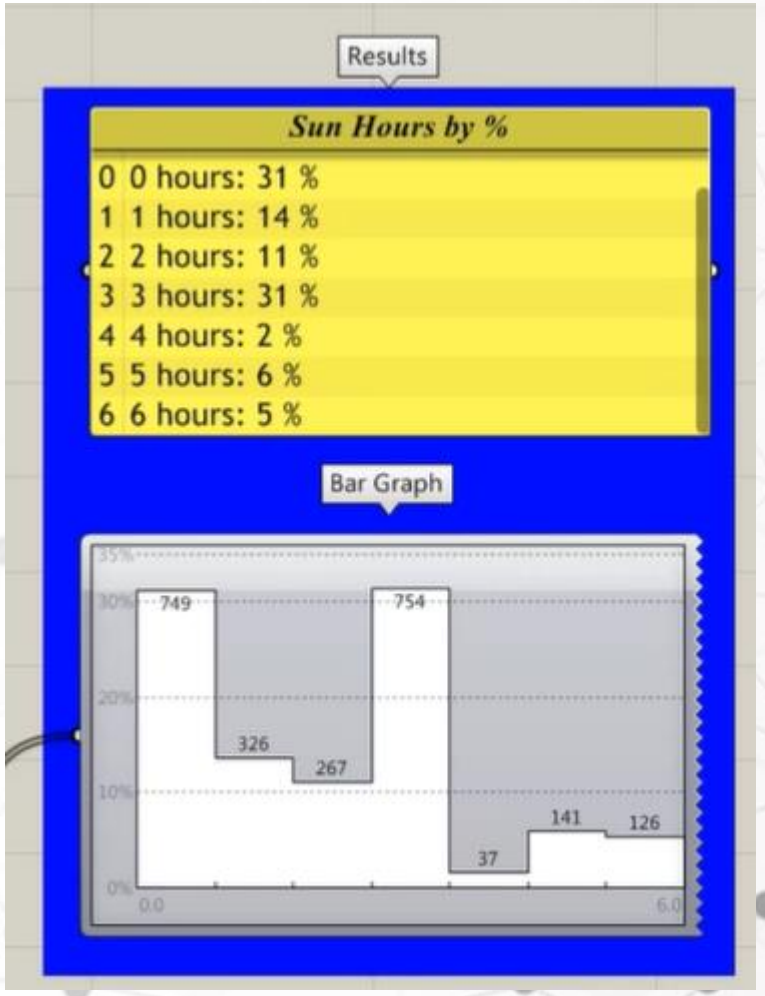

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Ladybug

Ladybug performs detailed analysis of climate data to produce customized, interactive visualizations for environmentally-informed design.

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Weather files

https://energyplus.net/weather

Weather Search

Search Results for: sydney

Your search matched 4 results.

- Sydney 717070 (CWEC)
- NSW Sydney 947670 (IWEC)
- NSW Sydney 947680 (RMY)
- NSW Mascot-Sydney Airport 947670 (RMY)

Search again

Weather Data Download

Click on a file to download.

- ddy
- epw
- stat
- Download All

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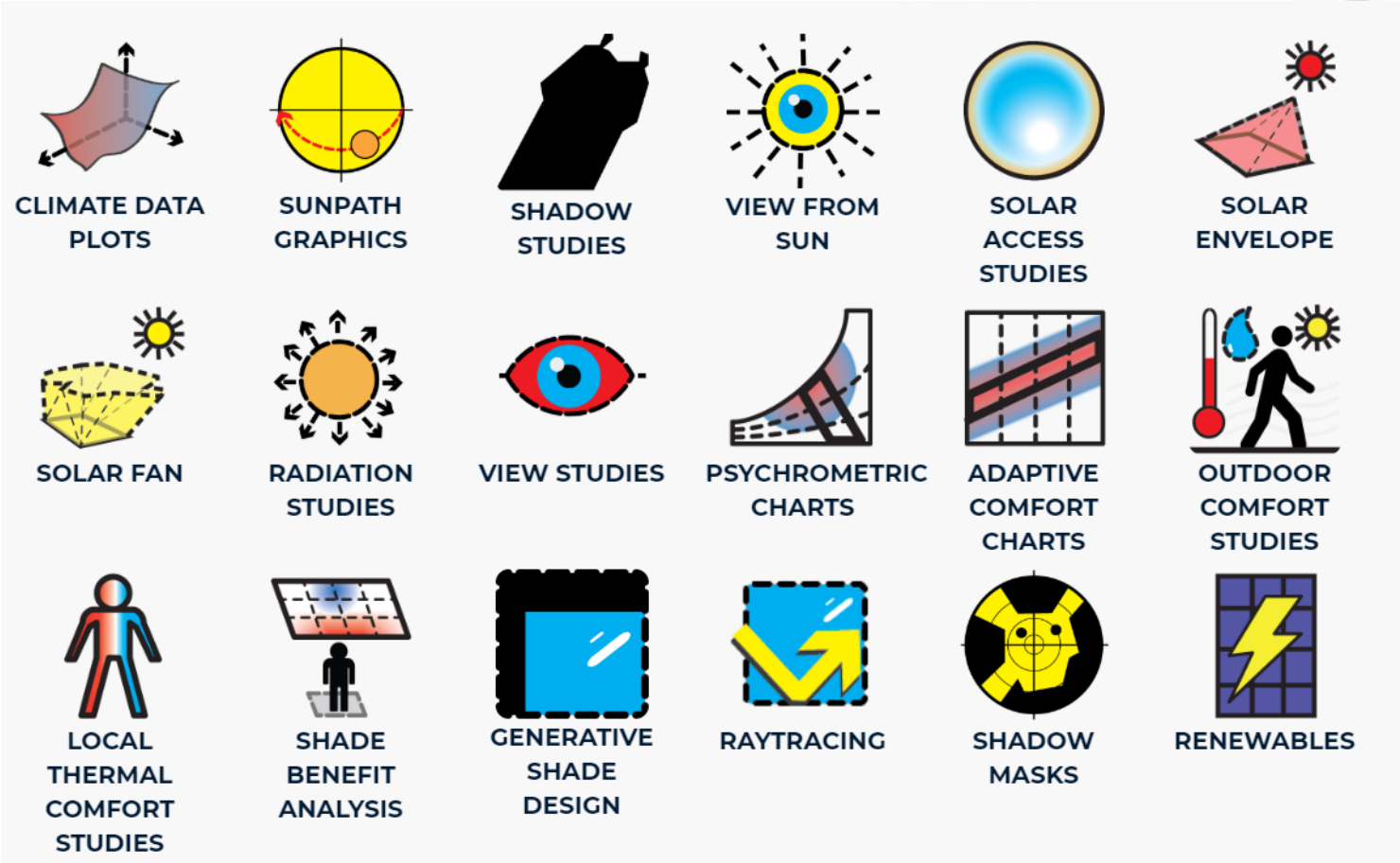
Ladybug



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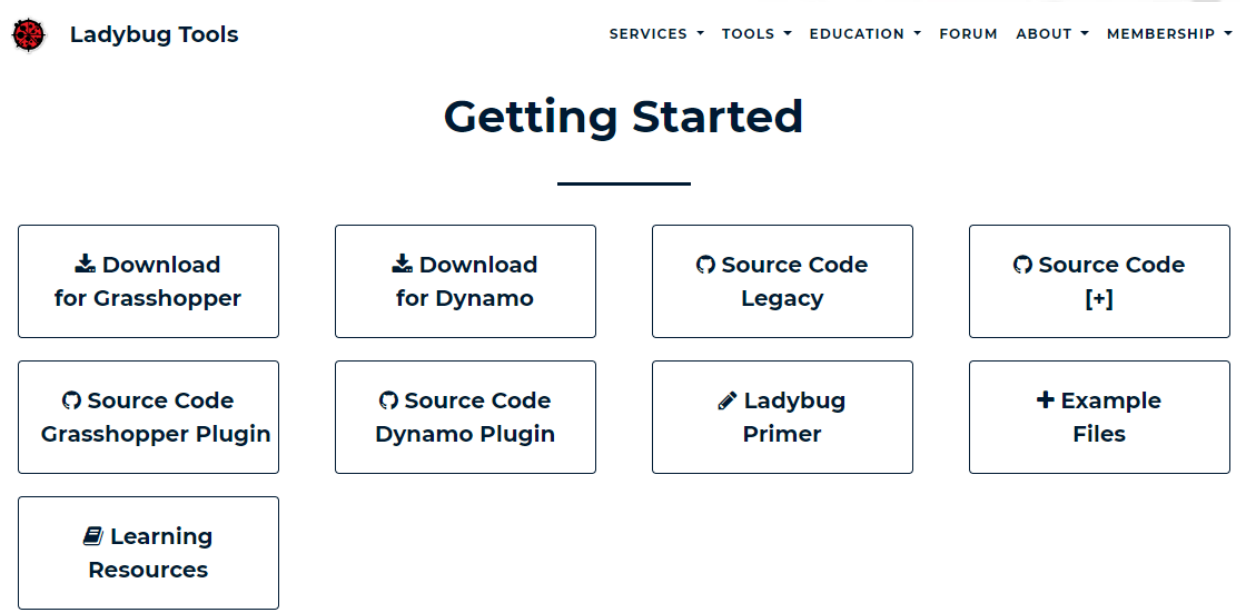
Ladybug

https://www.ladybug.tools/ladybug.html



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I’m using

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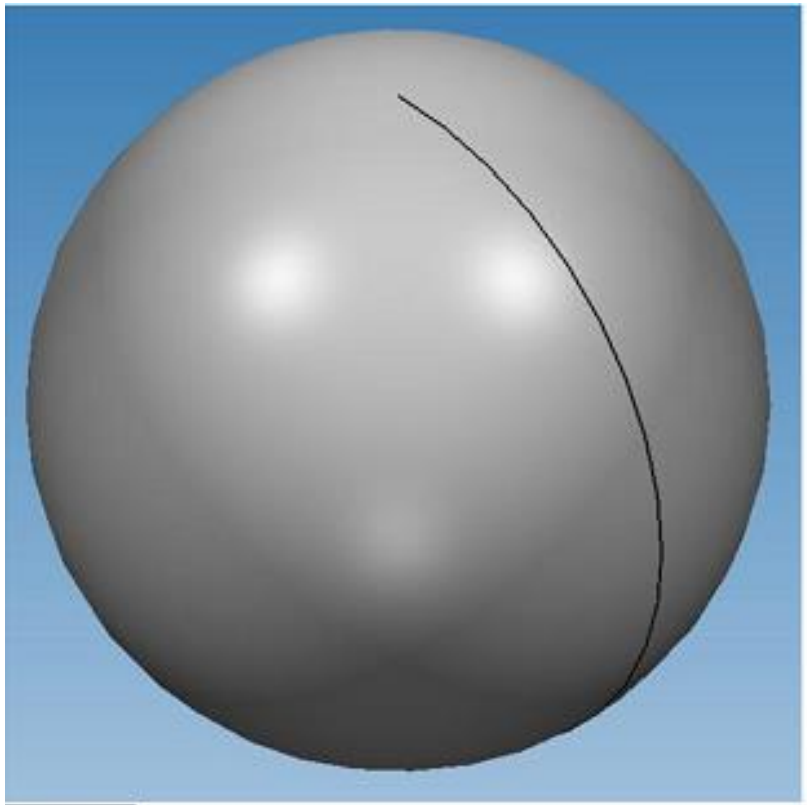
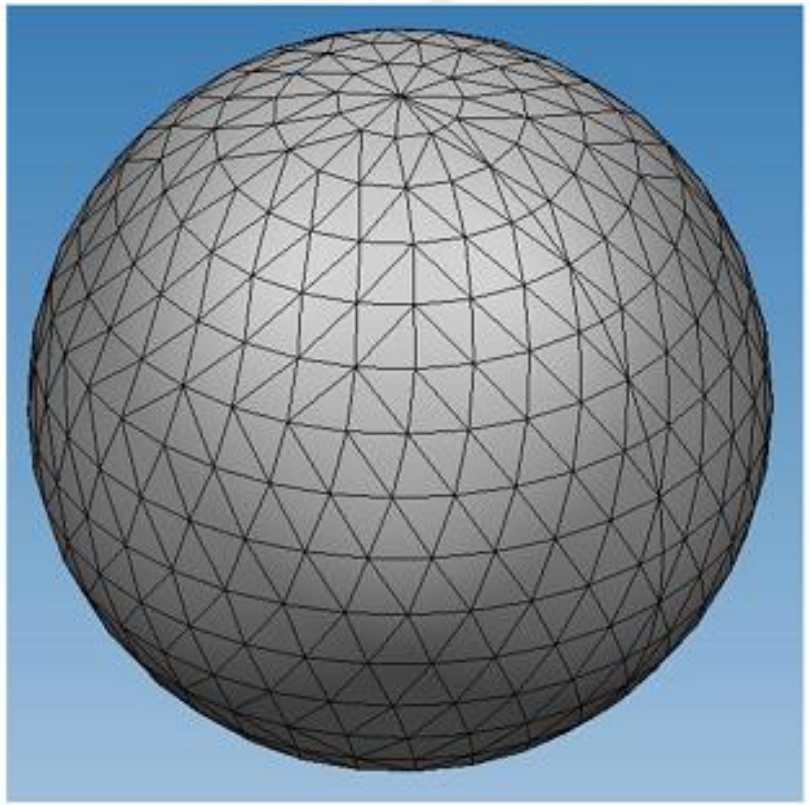
Brep vs. Mesh



650 × 331 Sphere in B-Rep representation



Sphere in polygonal representation (932 triangles)

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Without further ado…

Let’s get started…

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Next: Part 2

Culling irrelevant faces

Processing tallies

Graphing our results

Cleaning up the script

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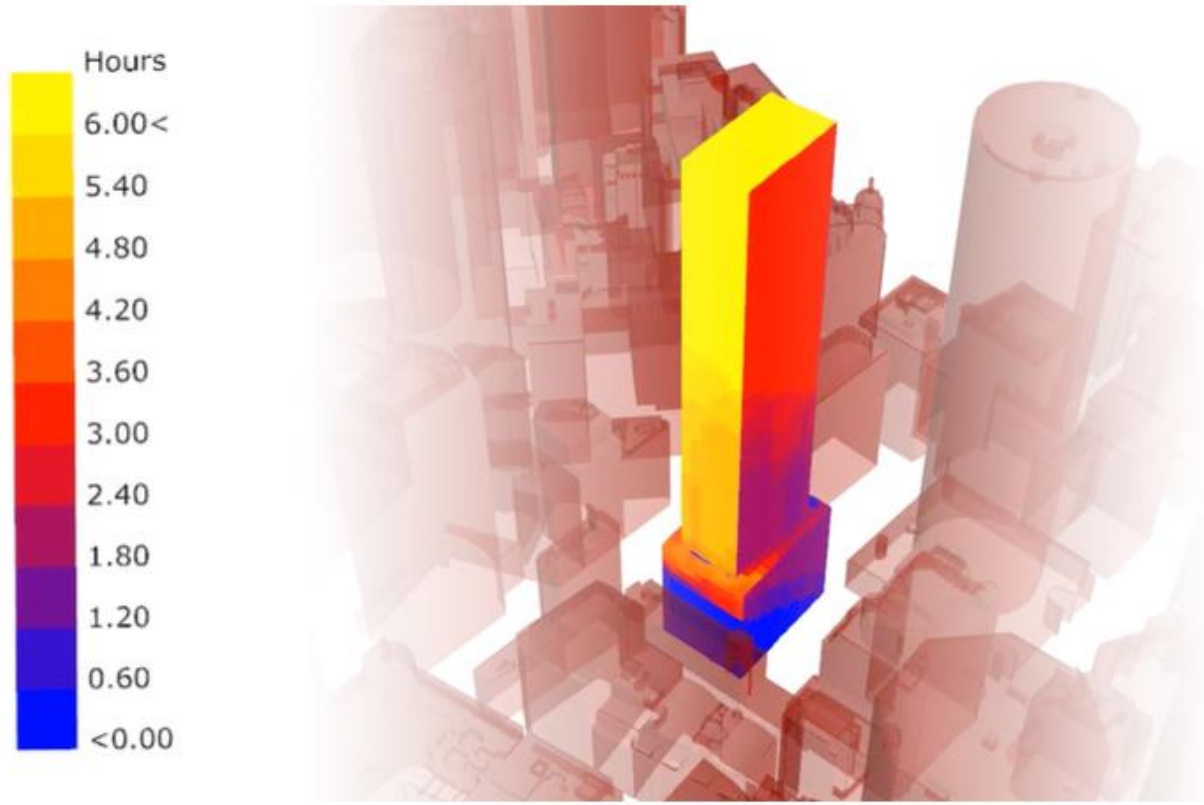

Sun Hour Analysis

Using Grasshopper, Part 1