

# Map Analysis – Topic 5 Figures

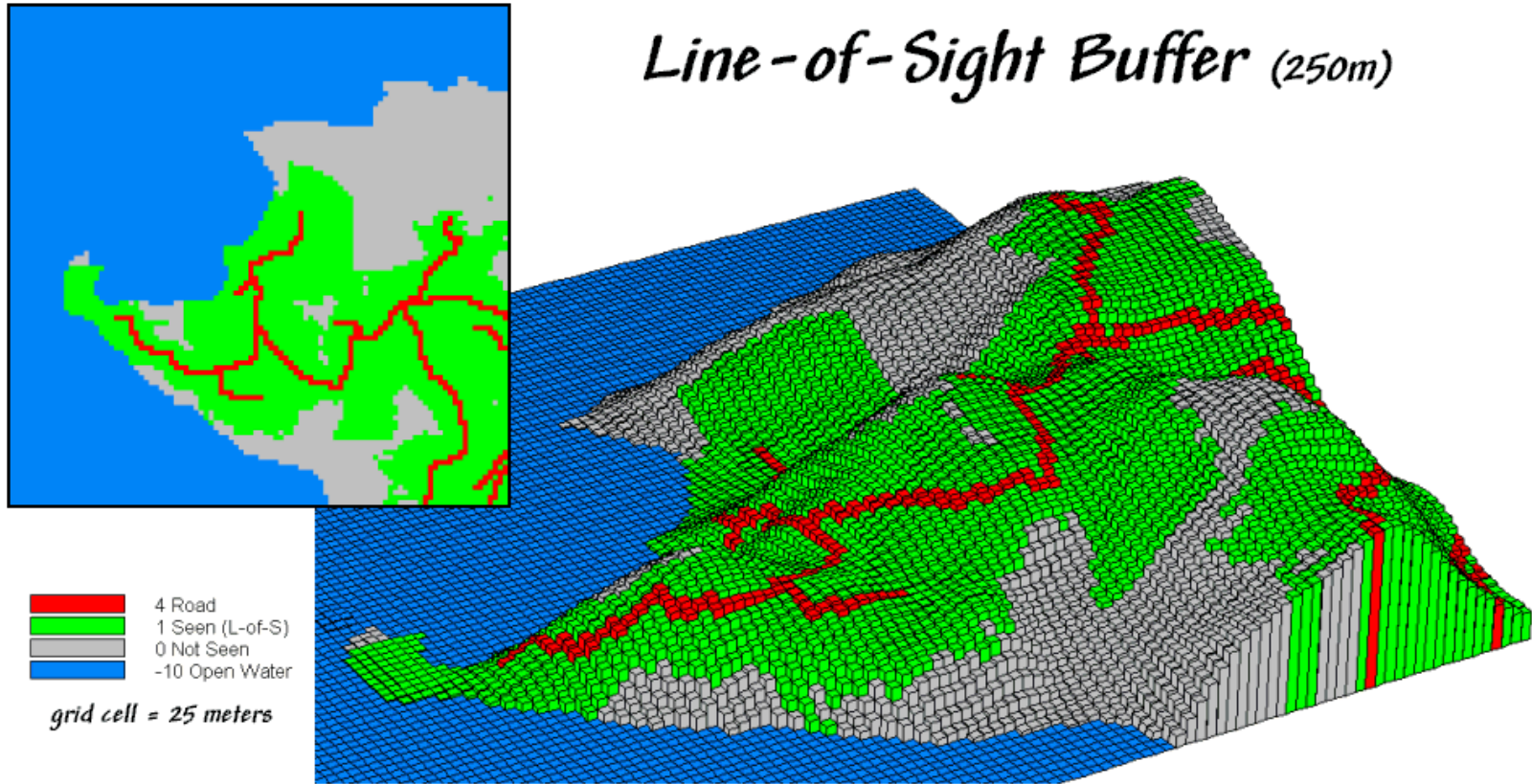


Figure 5-1. The “viewshed” of the road network forms a variable-width, line-of-sight buffer.

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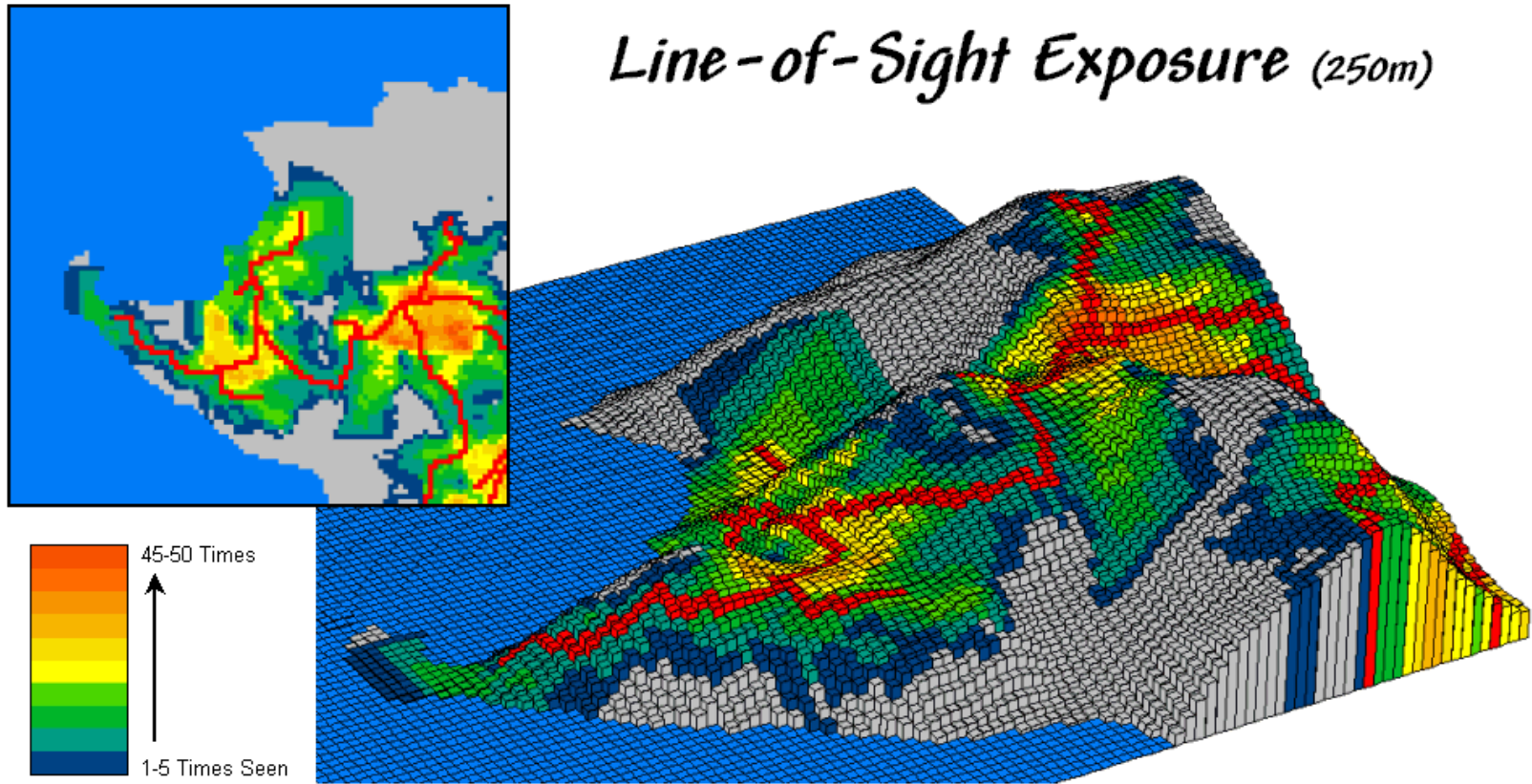


Figure 5-2. A “visual exposure” map identifies the number of times each map location is visually connected to an extended map feature.

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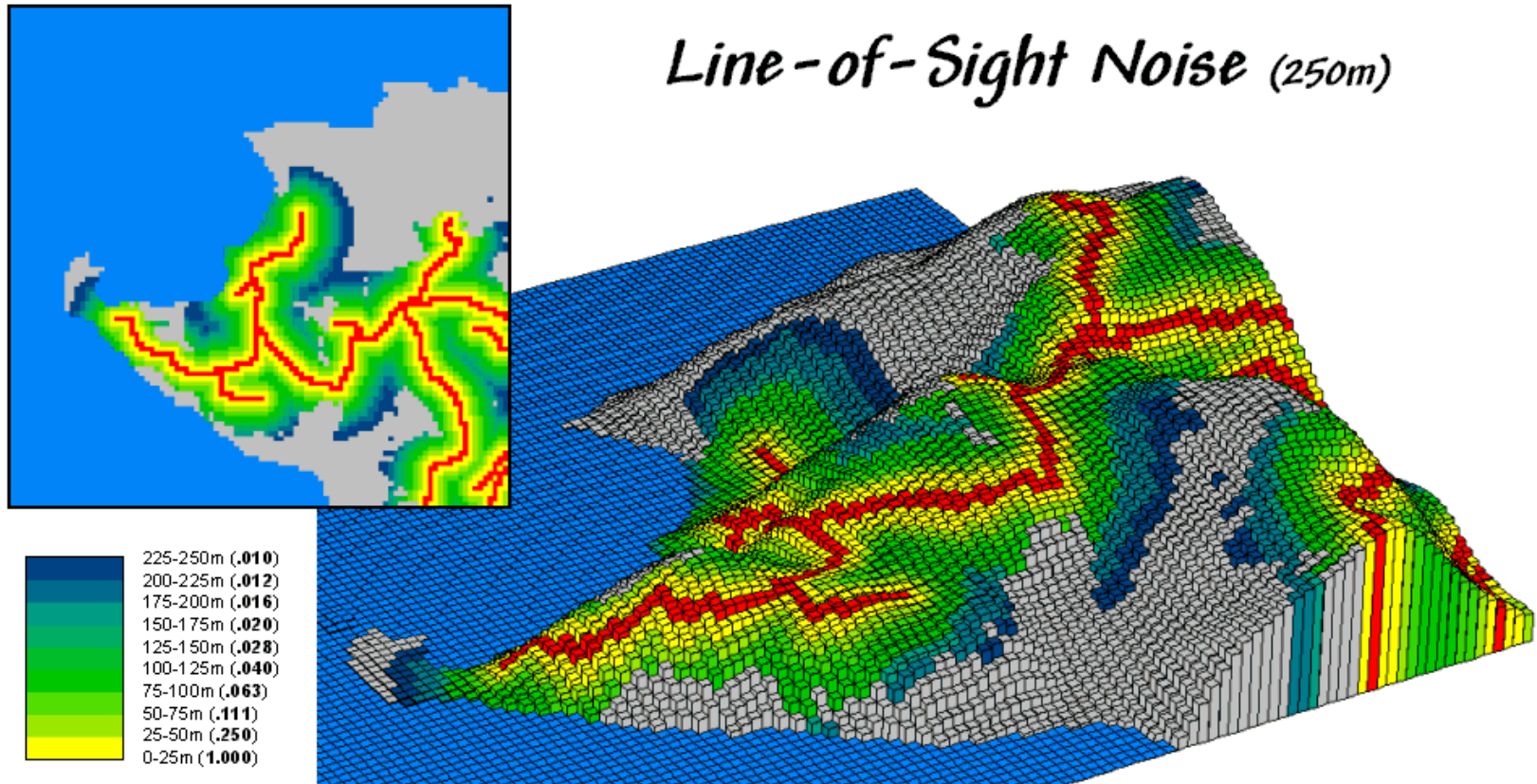


Figure 5-3. A “noise buffer” considers distance as well as line-of-sight connectivity.

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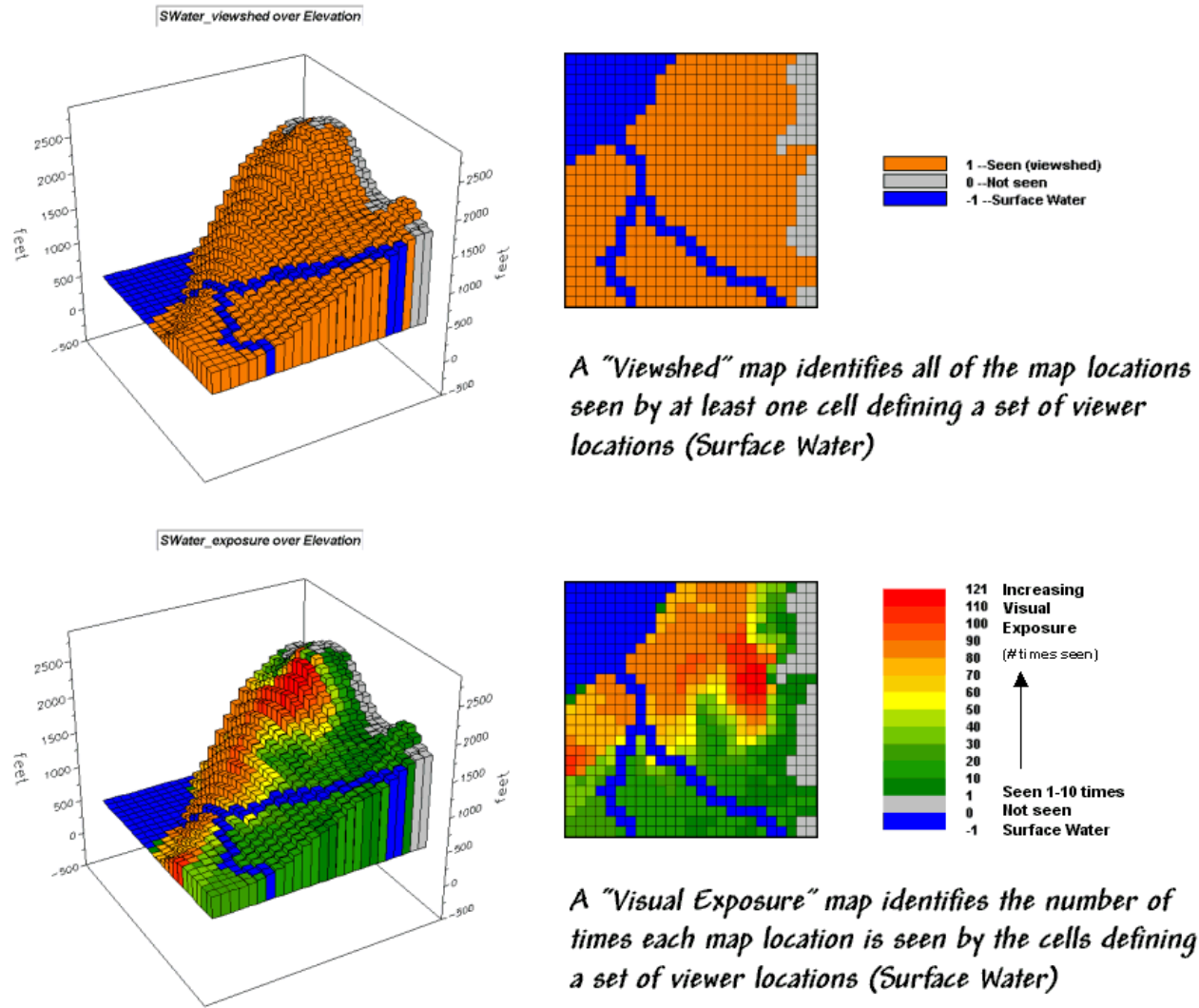
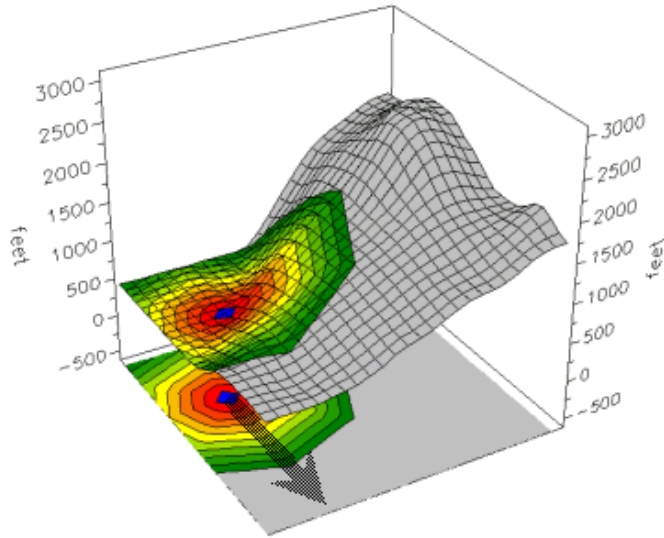


Figure 5-4. Viewshed of all surface water locations.

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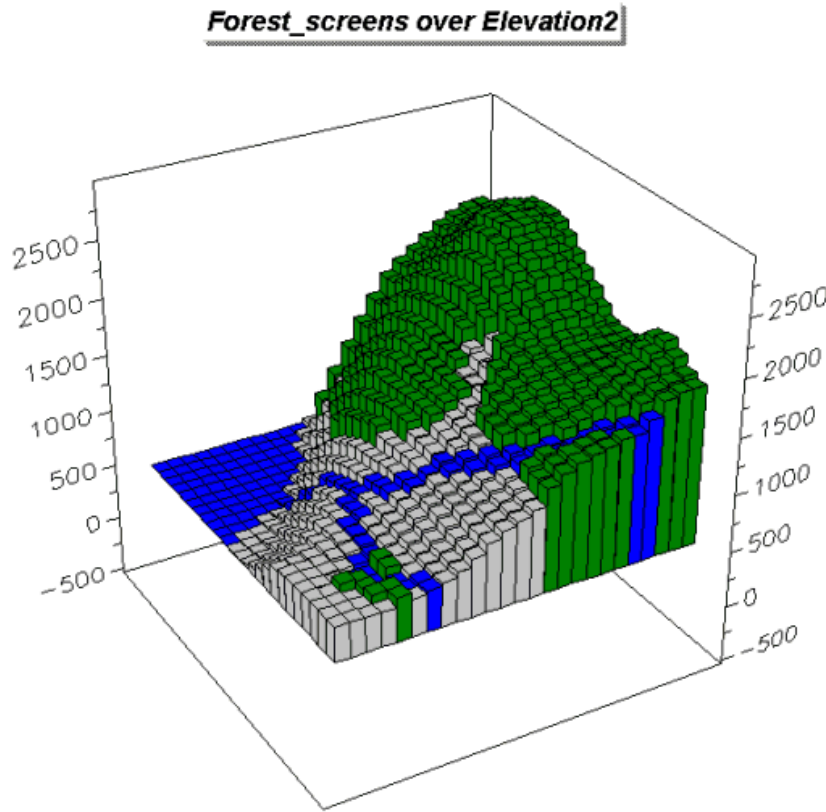
*Visual Connectivity is calculated by comparing the rise/run ratio along a direction- if it is greater than any of the previously calculated ratios that location is marked as seen; if not, it is marked as not seen.*

For ring #4, Rise/Run= (763-520) / (4\*328)= **.1852**

	Ring 0	1	2	3	4	5	6	7	8	9
Elevation	520 feet	556	622	695	763	818	857	911	883	877
Rise	--	36	102	175	243	298	337	391	363	357
Run	0 feet	328	656	984	1312	1640	1968	2296	2624	2952
<b>Rise/Run</b>	--	.1098	.1555	.1778	<b>.1852</b>	.1817	.1712	.1703	.1383	.1209
<b>Seen or Not Seen</b>	--	<i>Seen</i>	<i>Seen</i>	<i>Seen</i>	<i>Seen</i>	<i>Not</i>	<i>Not</i>	<i>Not</i>	<i>Not</i>	<i>Not</i>

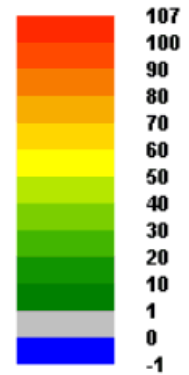
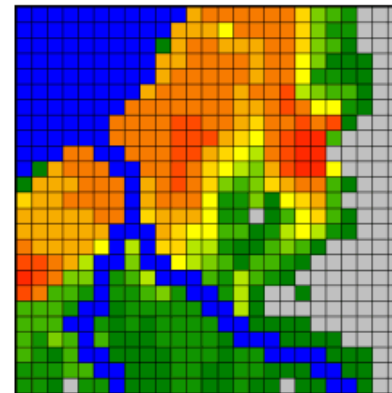
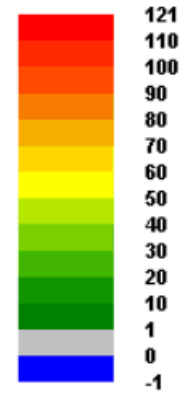
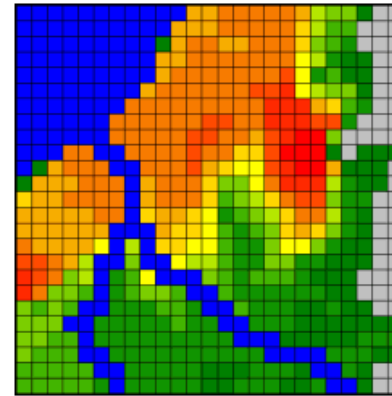
Figure 5-5. Example calculations for determining visual connectivity.

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*A forest canopy of 75-feet serves as an additional visual exposure barrier (screens)*

*Visual Exposure without trees*

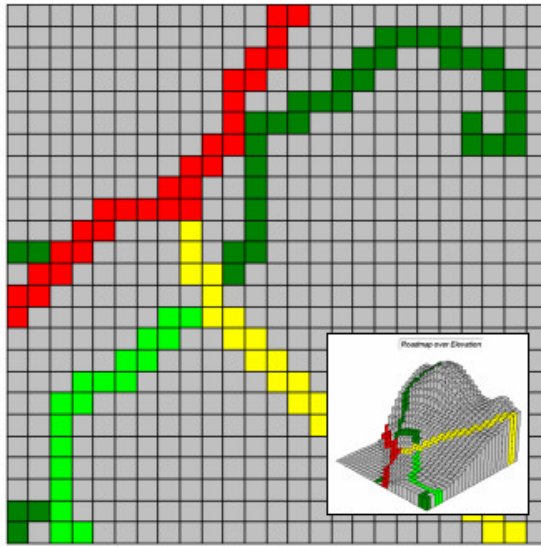


*Visual Exposure with trees*

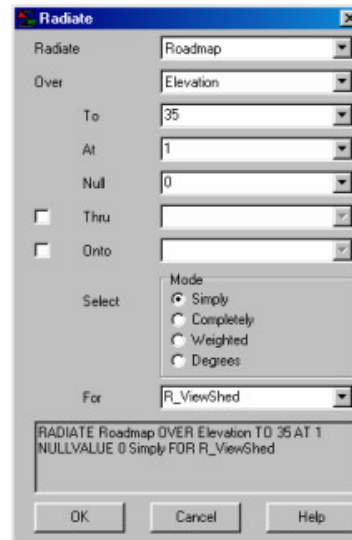
Figure 5-6. Introducing visual screens that block line-of-sight connections.

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...road cells (viewer locations)

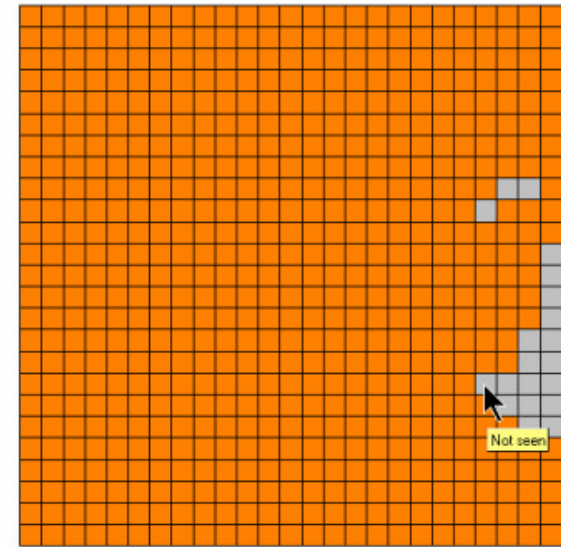


Roadmap



User Interface

...seen by at least one road cell



R\_ViewShed



Figure 5-7. Identifying the “viewshed” of the road network.

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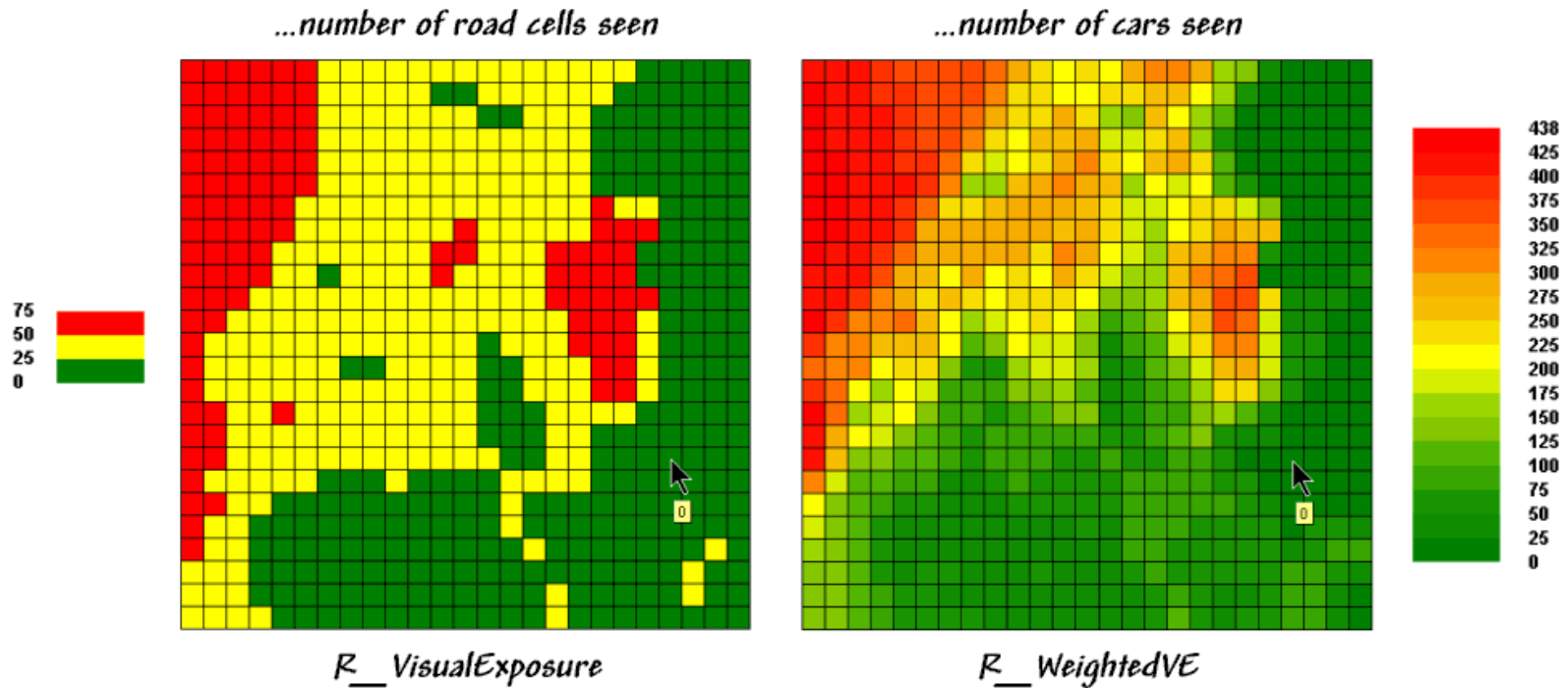


Figure 5-8. Calculating simple and weighted visual exposure.



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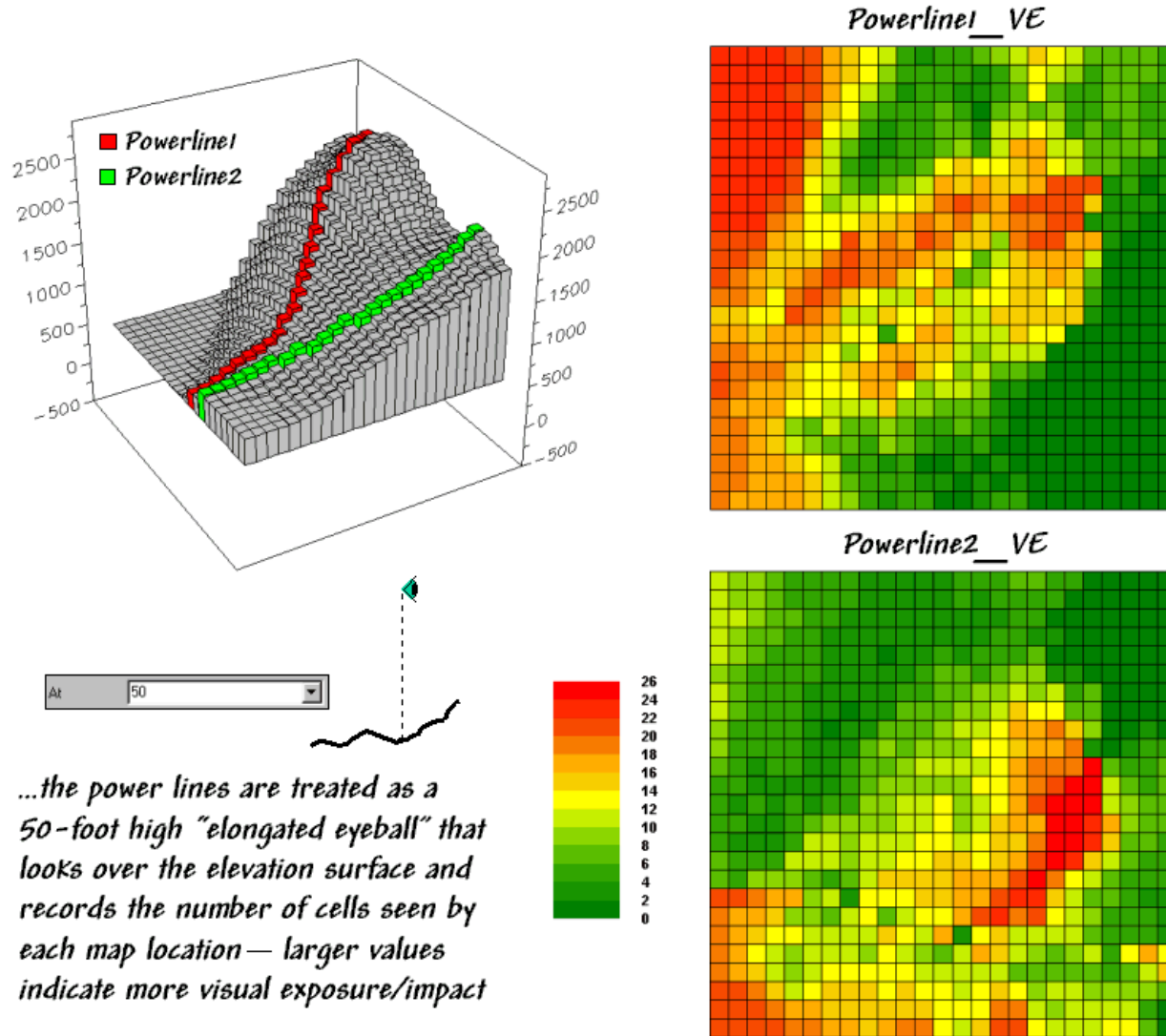


Figure 5-9. Determining the visual exposure/impact of alternative power line routes.

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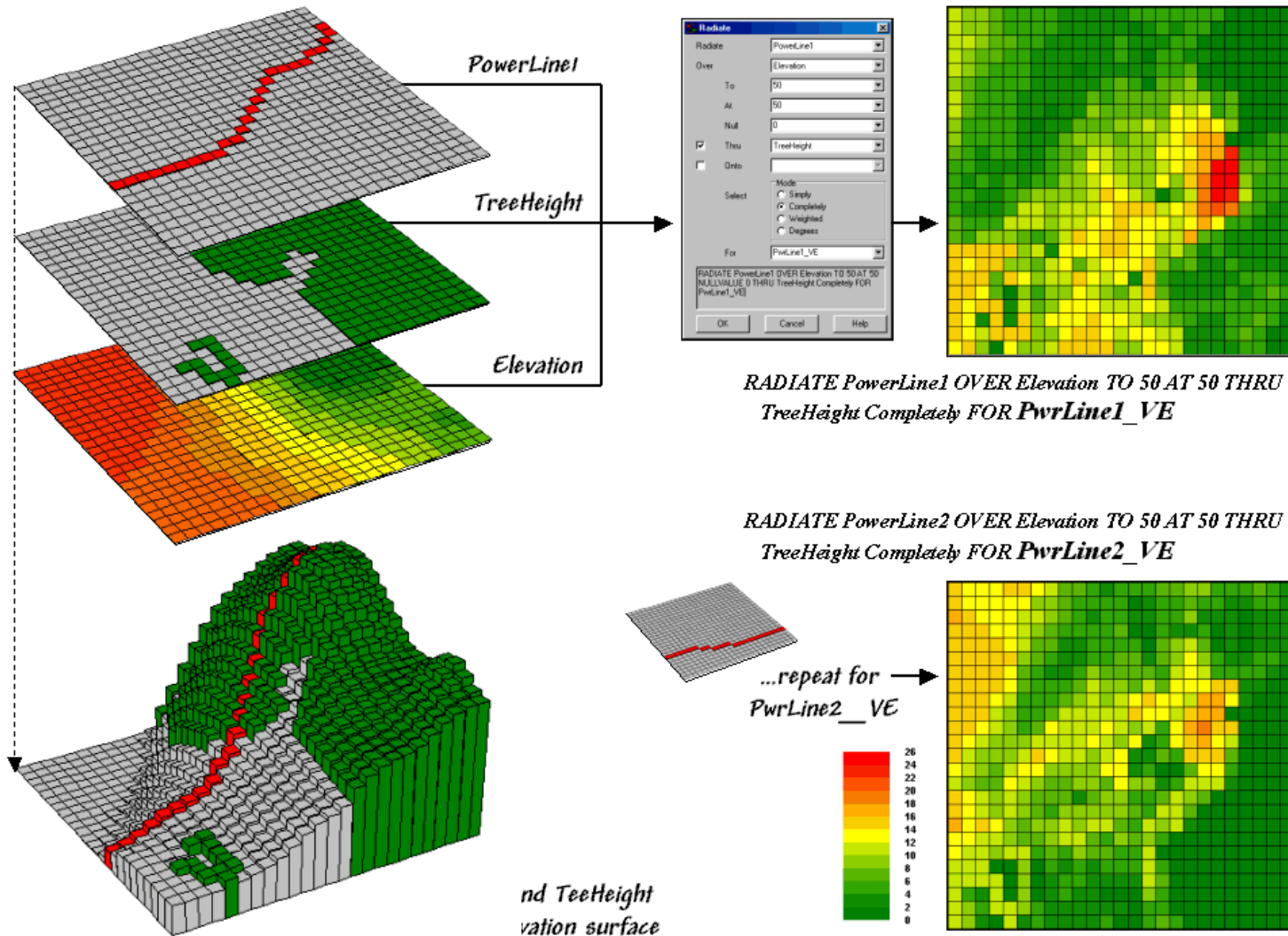
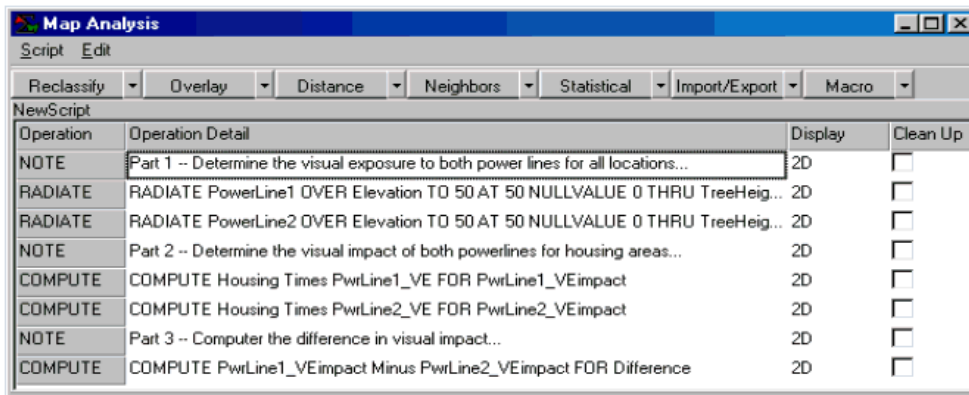
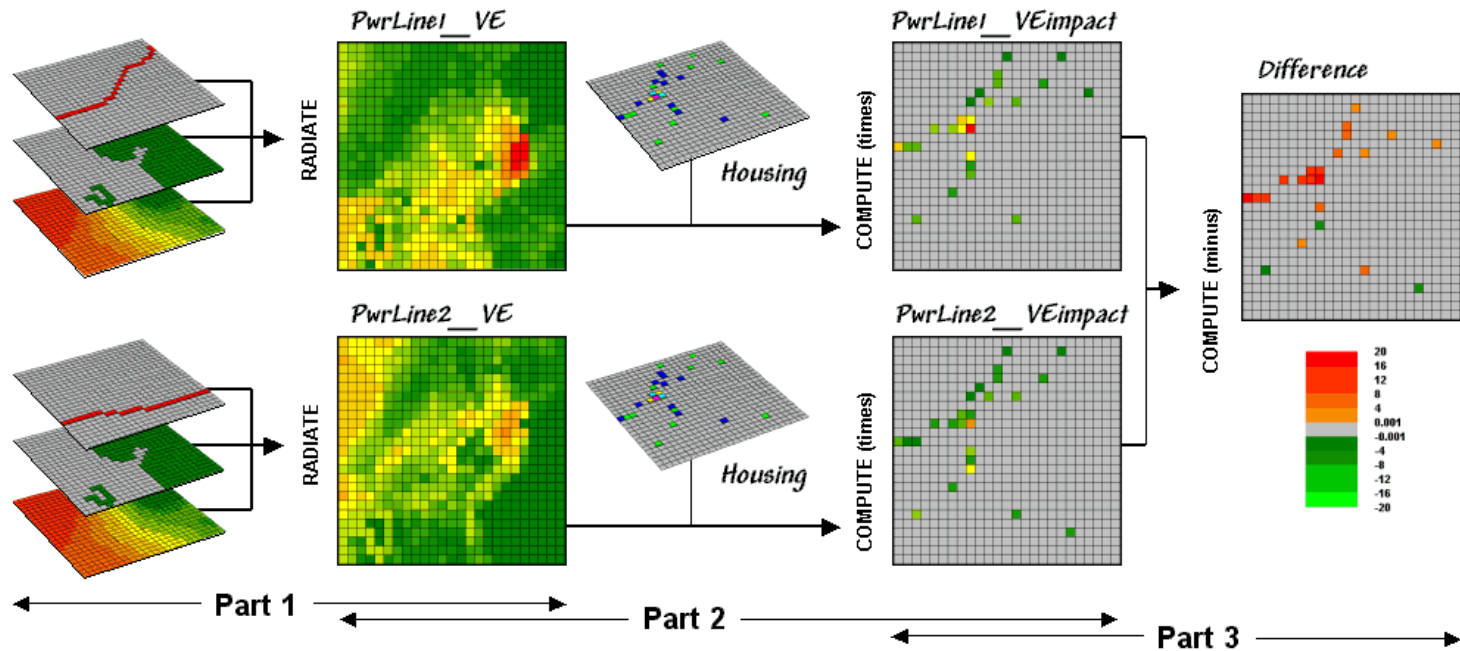


Figure 5-10. Calculating visual exposure for two proposed power lines.

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*...the processing flow for determining the relative visual impact involves five command sentences (script)*

Figure 5-11. Determining visual impact on local residents.

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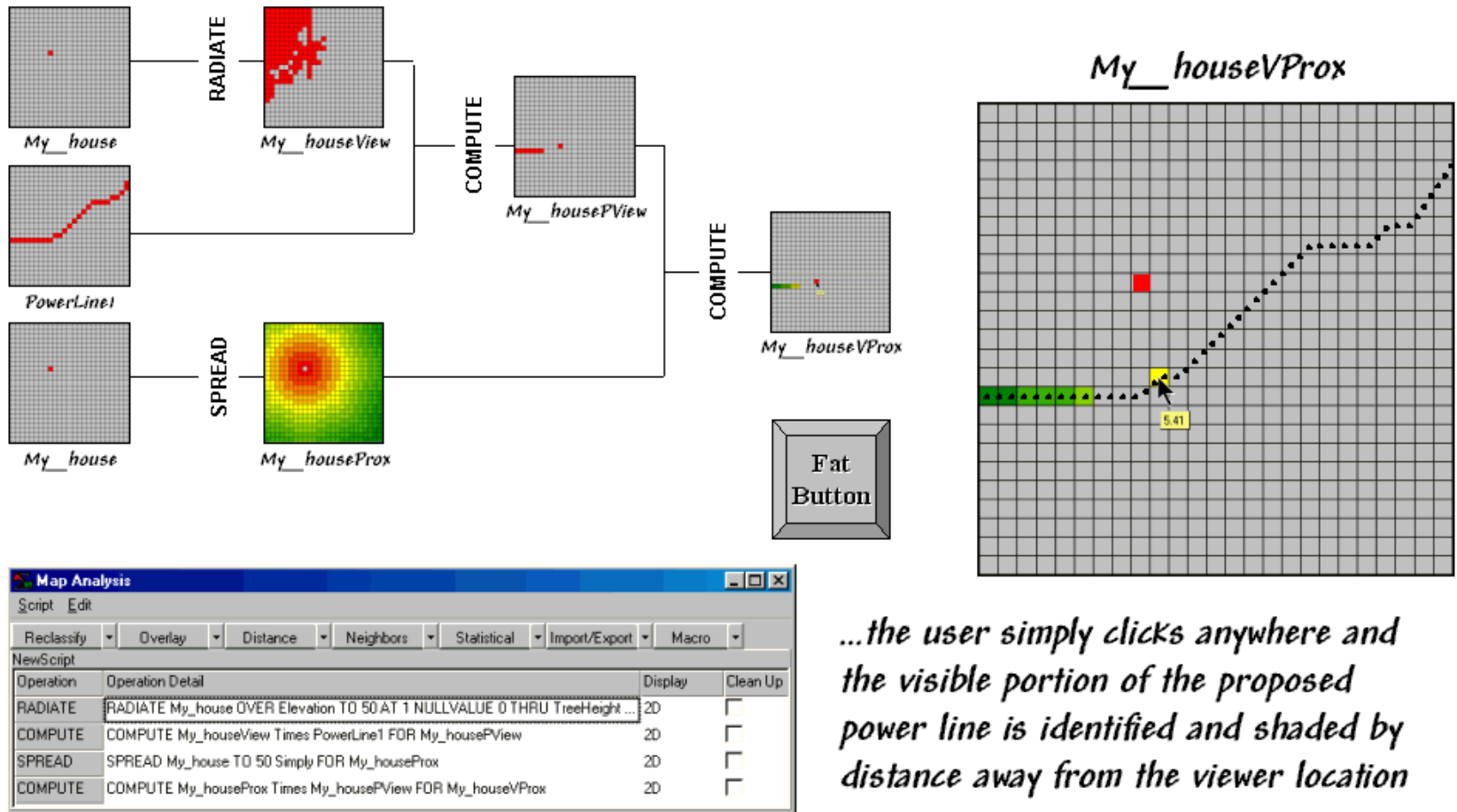


Figure 5-12. Determining visible portions of a proposed power line.