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GISpäev

3D analüüside tegemine ja linnamudelite veebis esitamine

REIN KASK, EVELI SISAS
AlphaGIS

GIS-päev, 14.11.2012

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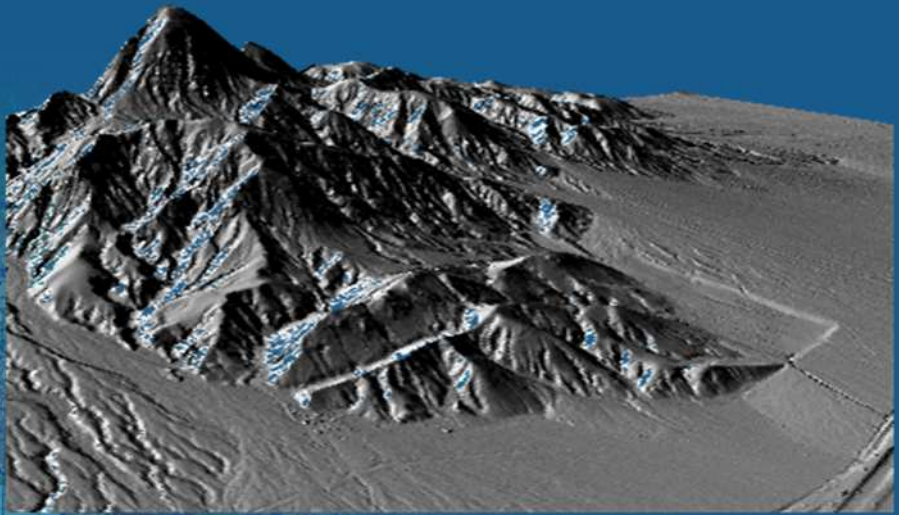
3D maailm



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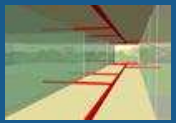
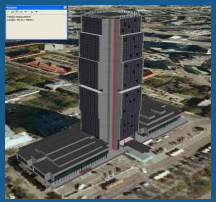
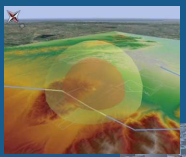
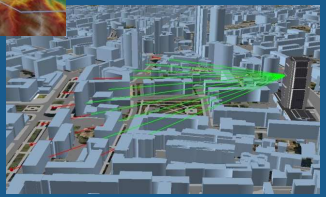
Sisukord

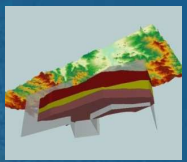
- 3D mudelid
- 3D andmed
- 3D analüüsid
- 3D visualiseerimine
- Linnamudelid











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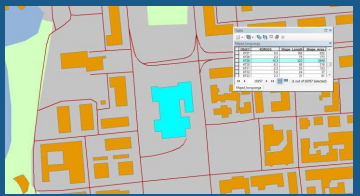
2D-st 4D-ni

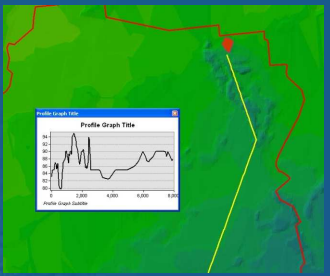
- 2D – tavaline kahemõõtmeline
- 2,5D – kahemõõtmelistel andmetel on olemas kõrgusinfo atribuudina
- 3D – kolmemõõtmeline
- 4D – kolmemõõtmelistel andmetel on lisaks olemas aja atribuut



Kõrguspinnad

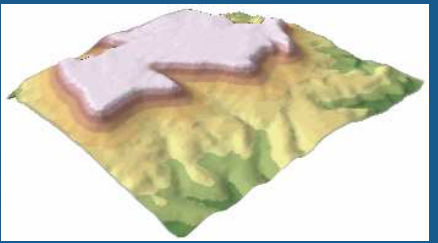
- Samakõrgusjooned

- Profiilid

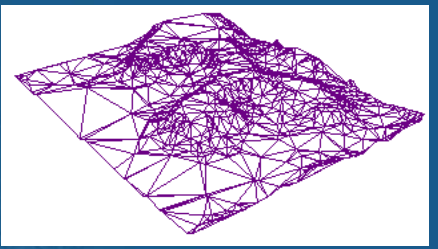


Kõrguspinnad

- Raster



- TIN mudel



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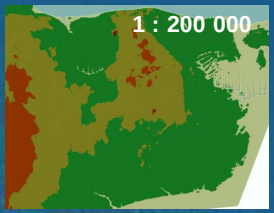
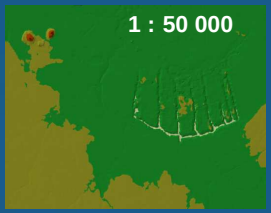
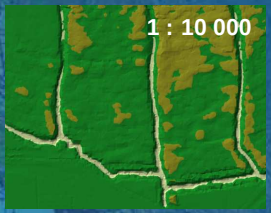
Mitmeresolutsiooniline TIN mudel

…ehk Terrain-andmehulk võimaldab kõrguspinda esitada erinevate detailsuse astmetega







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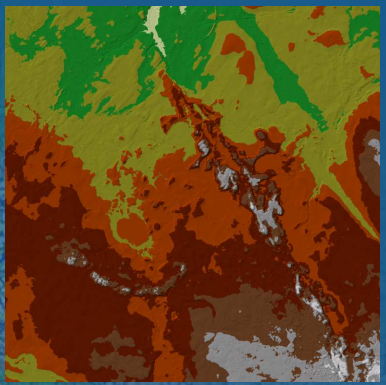
Kõrguspinnad

Maapinnamudel

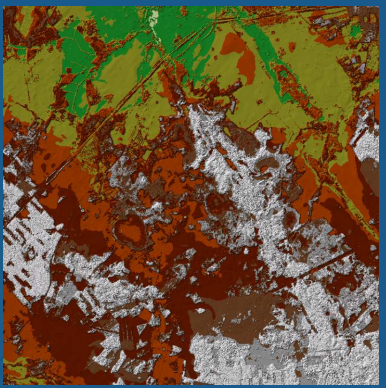
(DTM – *Digital Terrain Model*)



Ainult maapinna kõrgusinfo

Pinnamudel

(DSM – *Digital Surface Model*)



Sisaldab lisaks maapinna kõrgusinfole ka näiteks puude ja hoonete kõrguseid

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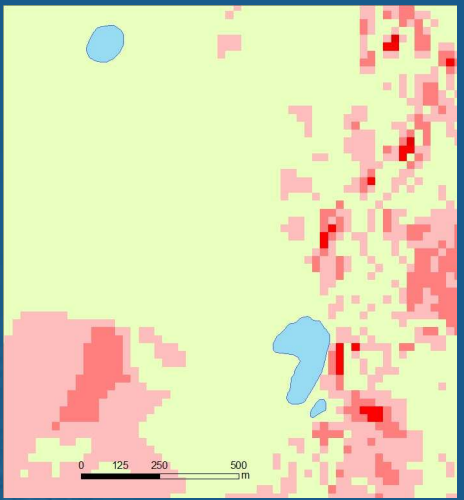
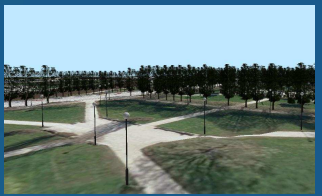
3D andmed

- Aastani 2008 juhuslikud
- LIDAR



3D vektorobjektid

- 3D punktid, jooned, polügoonid
- 3D leppemärgid



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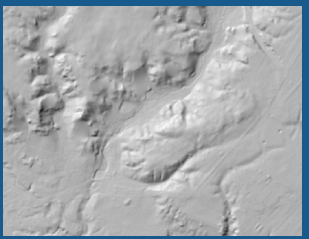
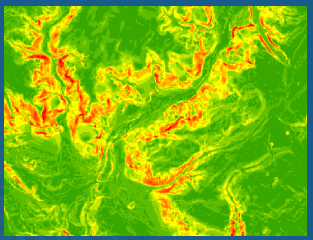
3D analüüs

Pindade analüüsid

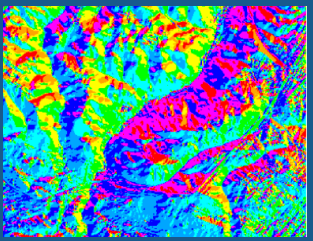
- Nõlvavarjutus



- Maapinna kalle



- Aspekt



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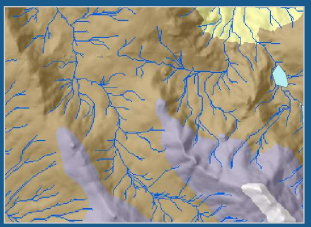
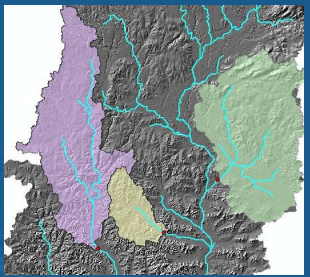
Hüdroloogia

- Vooluvete võrk



- Vesikonnad, valgalad



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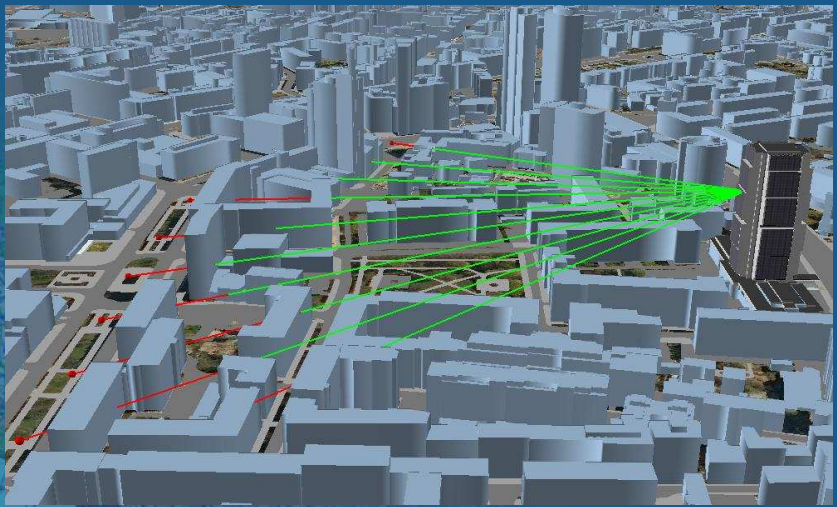
Nähtavusanalüüs



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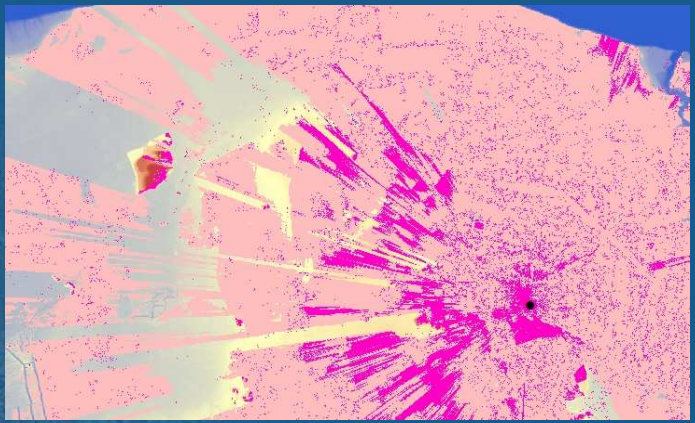
Nähtavusanalüüs

Nähtavus pinnamudeliga

Nähtavus maapinna mudeliga



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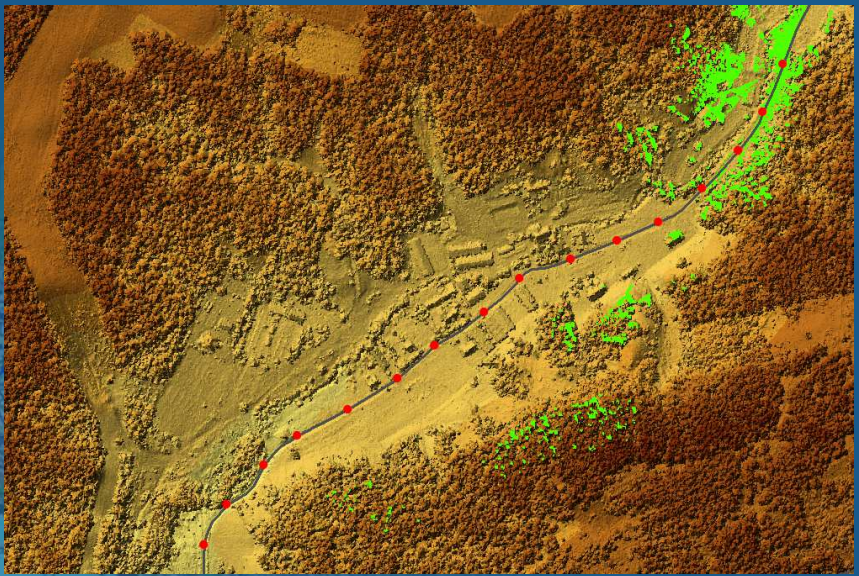
Nähtavus liikumisel



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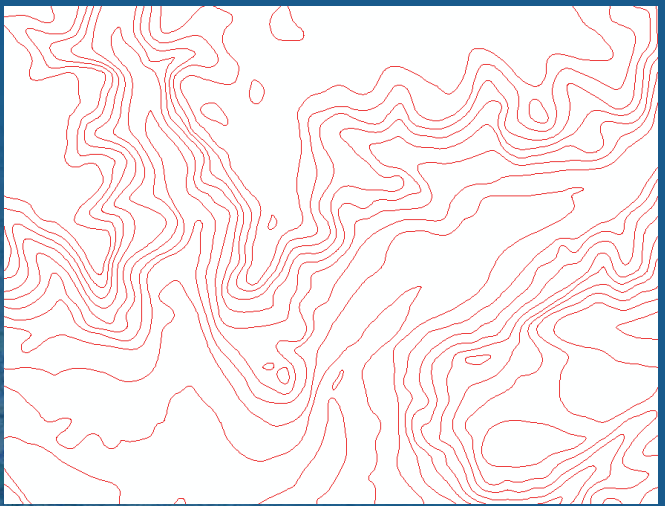
Kõrgusjoonte genereerimine



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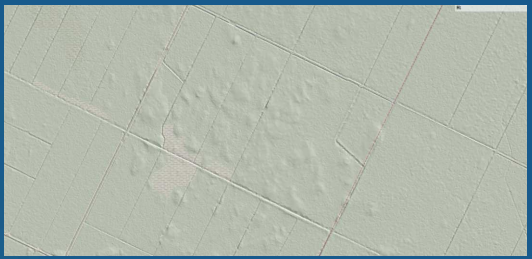
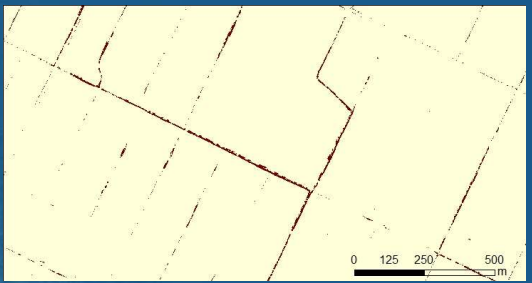
Kraavide leidmine

- Nõlvavarjutus



- Analüüs



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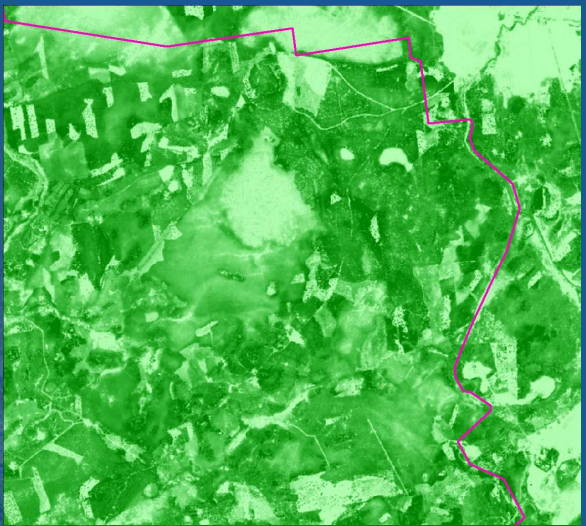
Taimestiku kõrgus



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Taimestiku tihedus

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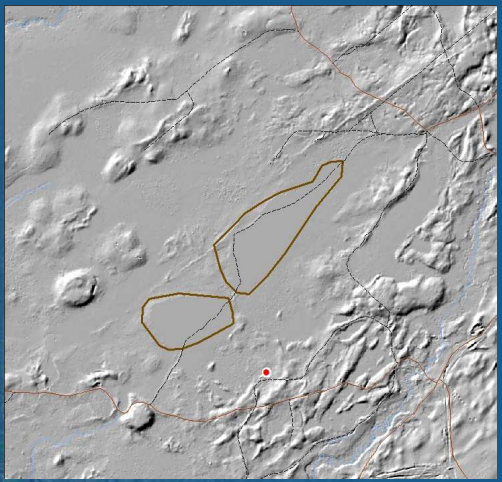
Mahtude arvutused



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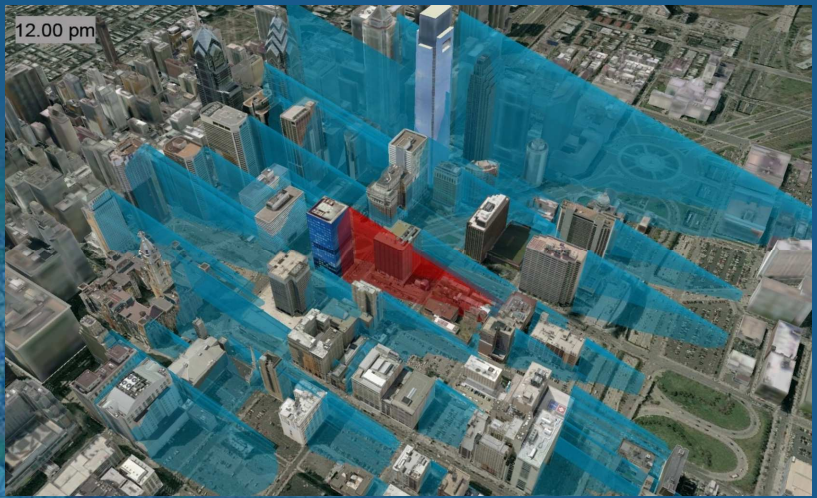
Varjude analüüs



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Visualiseerimine

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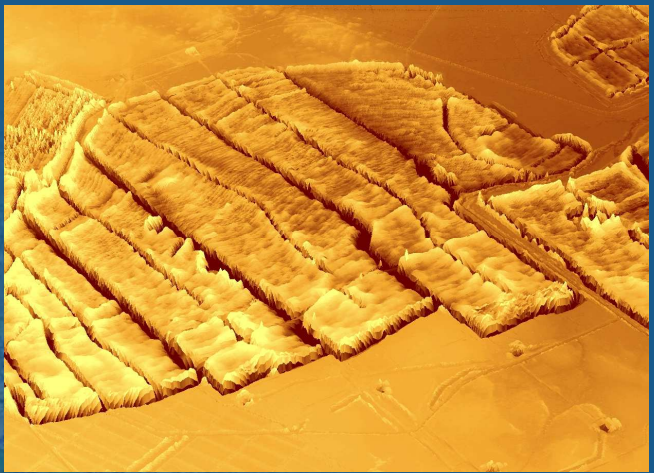
Visualiseerimine



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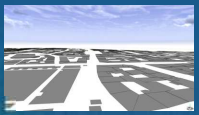
Linnamudelid



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Linnamudelid veebis

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Tänan tähelepanu eest!

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