FME WORLD TOUR 2020

Dimensiune geospațială în Minecraft folosind FME

Cornel TUDOSE, Daniel TUDOSE

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Cine suntem? TUDOSE²

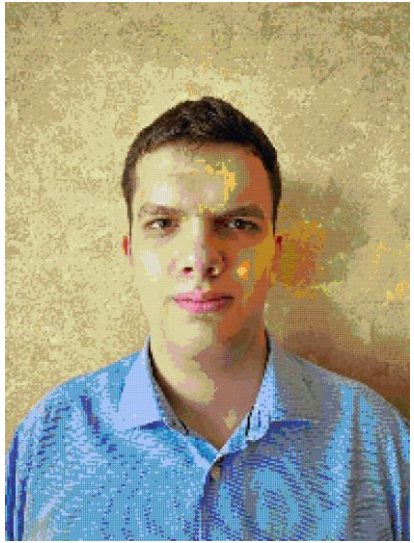
Cornel TUDOSE

- Universitatea din Bucuresti
- Utilizator de solutii geo-spatiale

Cine suntem? TUDOSE²

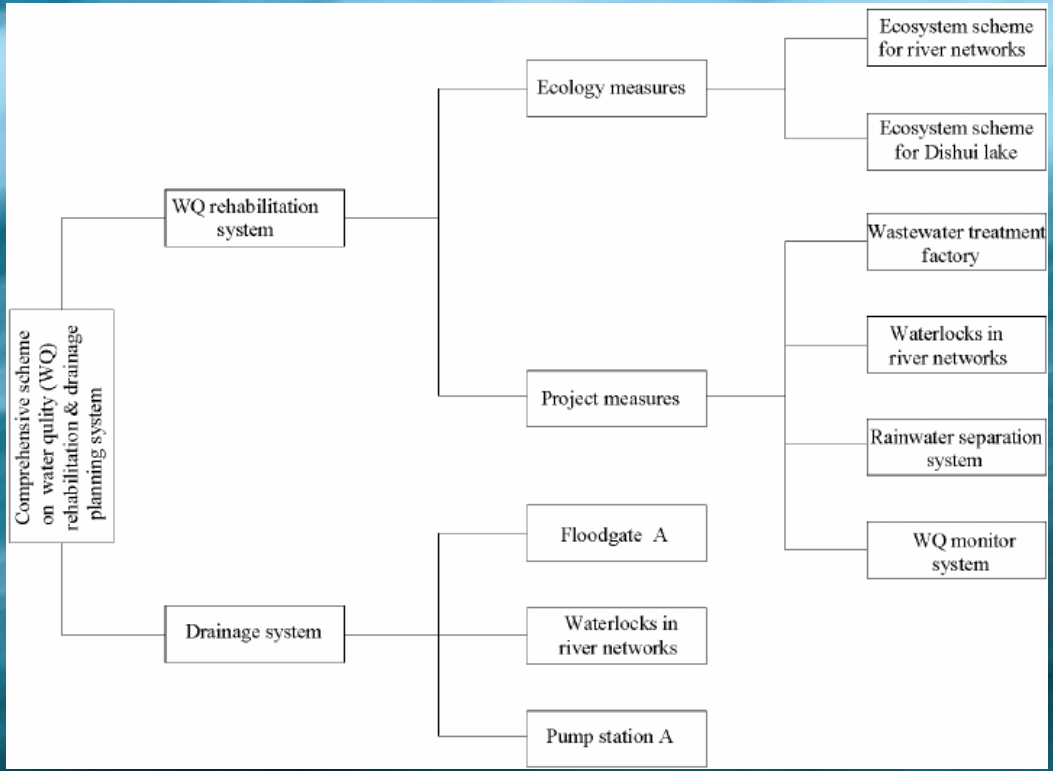
Daniel TUDOSE

- University of Glasgow, School of Computing Science
- Minecraft MASTER



Consultarea civica/dezbaterea publica – parte din procesul decisional la nivel local si national

Sursa: Mathematical model of water quality rehabilitation with rainwater utilisation: A case study at Haigang (www.researchgate.net)



Planificare

Sursa: Primaria Capitalei

Directia Generala Administratie si Relatia cu CGMB - CONSULTAREA CETĂȚENILOR ȘI A ASOCIAȚIILOR LEGAL CONSTITUITE

Proiecte Supuse dezbaterii publice

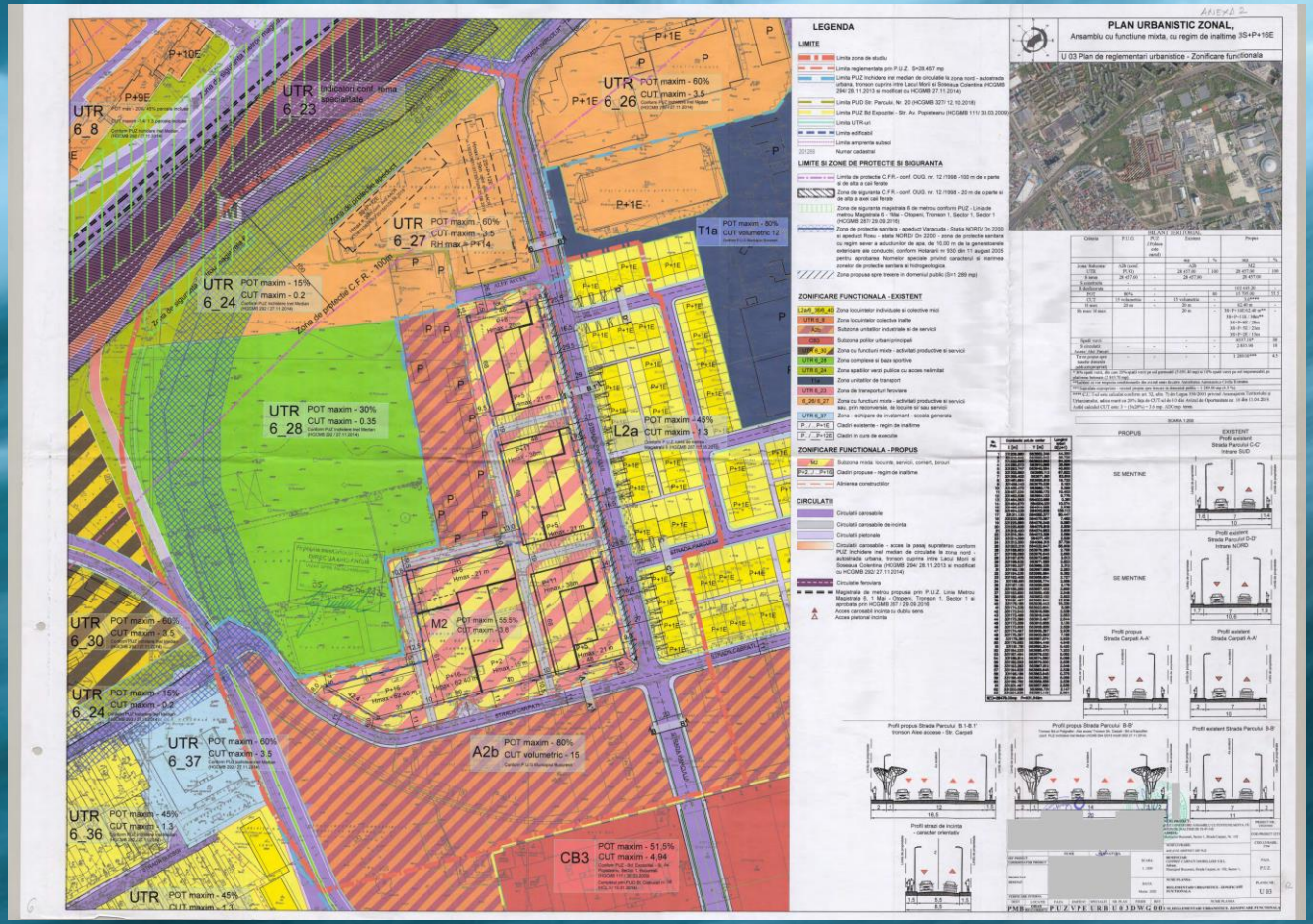
Cauta | Cauta!

Atenție! Comentarii pot fi adăugate doar la proiectele supuse dezbaterii publice aflate în termen! Acestea sunt subliniate în tabel

Nr. Proiect	Data publicarii proiectului	Denumire	Termen pentru primirea recomandarilor	Comentarii	Versiune îmbunătățită a proiectului de hotărâre *	Legaturi utile
1523	2020-08-11	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STR. CARPATI NR.102, LOT 1 ȘI LOT 2, SECTORUL 1	2020-09-11	2		
1522	2020-08-11	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal ȘOSEAUA VERGULUI NR.59, SECTOR 2	2020-09-11	0		
1521	2020-08-11	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STR. JANDARMERIEI NR.9 A - SECTOR 1	2020-09-11	1		
1520	2020-08-10	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal PUZ - BULEVARDUL EXPOZITIEI NR. 2 "AUTO ROM "/SECTOR 1	2020-09-10	1		
1519	2020-08-10	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STR. RACORDĂRII NR. 31-33 ȘI STR. MIMOZEI NR. 116- SECTOR 1	2020-09-10	0		
1518	2020-08-10	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STRADA CORALILOR NR. 18, SECTOR 1	2020-09-10	3		
1517	2020-08-07	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STRADA OBOLULUI NR. 10, INTRAREA FIENI NR. 5, SECTOR 4, BUCUREȘTI	2020-10-21	15		
1516	2020-08-07	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal PUZ - STRADA SCAUNE NR. 3A, SECTOR 3	2020-09-07	0		
1515	2020-08-07	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STR. DR. IACOB FELIX Nr. 74-SECTOR 1	2020-09-07	3		
1514	2020-08-07	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal ȘOSEAUA ELECTRONICII NR. 31 - SECTOR 2	2020-09-07	0		
1513	2020-06-29	Proiect de hotărâre privind privind aprobarea Planului Urbanistic Zonal STRADA DOAMNEI NR. 7-9-11/ SECTOR 3	2020-07-30	30		
1512	2020-06-23	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal PUZ - STRADA POVESTEI NR. 15-15D-17A-19 / SECTOR 4	2020-07-24	11		
1511	2020-05-29	Proiect de hotărâre privind privind aprobarea Regulamentului de organizare si functionare a serviciului public de salubrizare in Municipiul Bucuresti	2020-06-29	7	**Descarcă versiunea îmbunătățită !** **Descarcă versiunea îmbunătățită versiunea 2!**	
1510	2020-04-14	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal STR. TUDOR VIANU NR. 46A, SECTOR 1, BUCUREȘTI	2020-06-01	2		
1509	2020-04-14	Proiect de hotărâre privind aprobarea Planului Urbanistic Zonal PUZ - STRADA ROMULUS NR.33, SECTOR 3	2020-06-01	0		

Transparenta decizionala

Sursa: Primaria Capitalei



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Organizatiile adopta *Minecraft* pentru o abordera in joaca a scenariilor din lumea reala

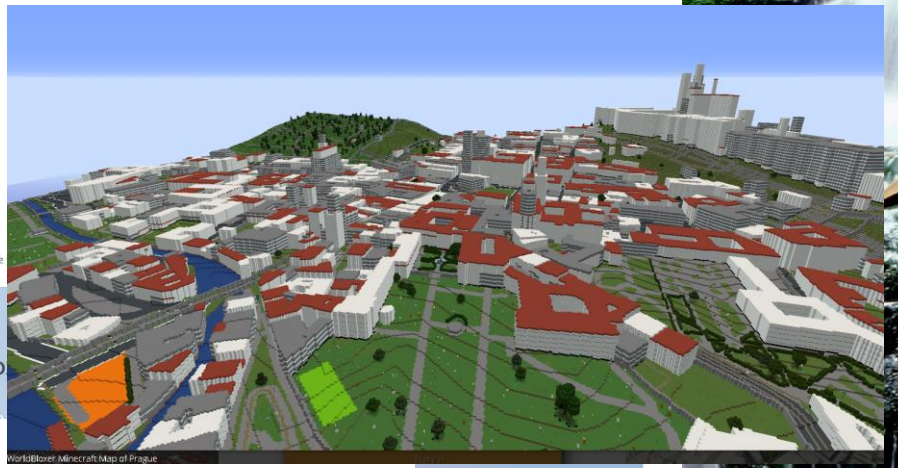
Jocuri/Geospatial - Exemple:

1. GeoBoxers
2. Block by Block
3. Blockholm
4. Kristianstad

O ALTFEL DE ABORDARE

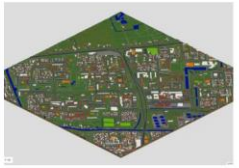
GeoBoxers

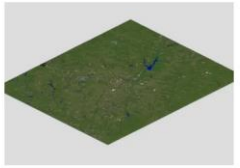
www.geoboxers.com



... in Minecraft

Burnie, Tasmania


Overvecht


Winston-Salem, North Carolina

Shetland Islands

Riga

Kiel

Karlskrona

Trondheim

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Block by Block

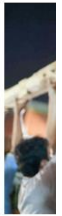
www.blockbyblock.org

Select Region

Select Theme

Building Futures in Anaheim

Building Community Cohesion in Beirut



Building Space for All Ages in East Java, Indonesia

Rebuilding Safe Parks in Johannesburg

Rebuilding Tradition in the Kathmandu Valley

Building Recreational Space in Khulna

Building Peace In Kosovo

Pristina and Mitrovica, Kosovo
Project type: Public market, Waterfront
Collaborators: UN-Habitat, Municipality of Pristina
Region: Europe
Tags: post-conflict rehabilitation, sports and recreation, social inclusion and human rights, multigenerational use, economic opportunity, policy change

Building Quality of Life in Haiti

Building Safer Streets for Teenage Girls in Hanoi

Building Peace in Kosovo

Building Vibrant Community Gathering Places in Lima

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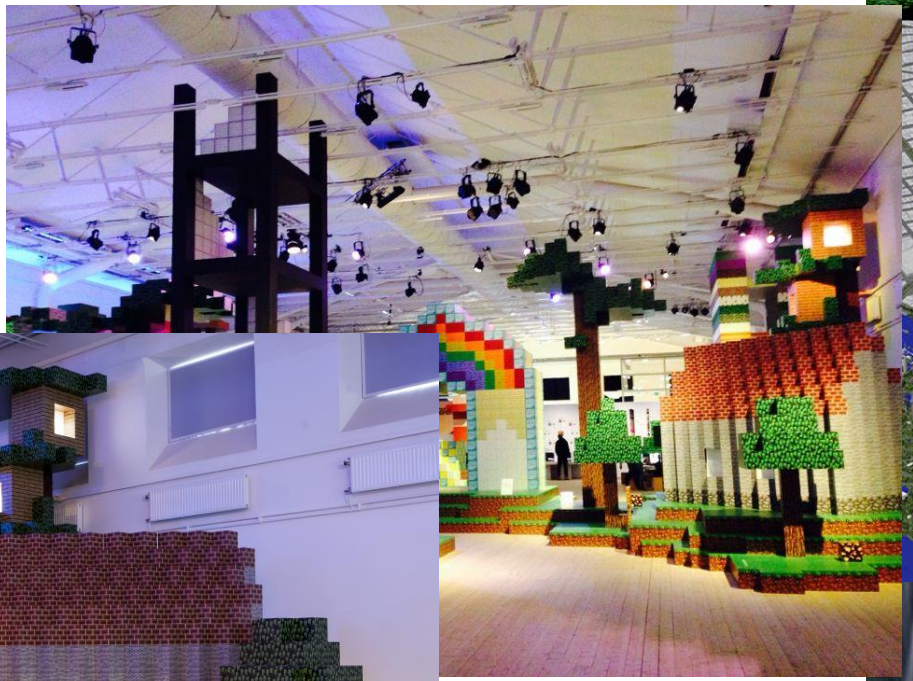
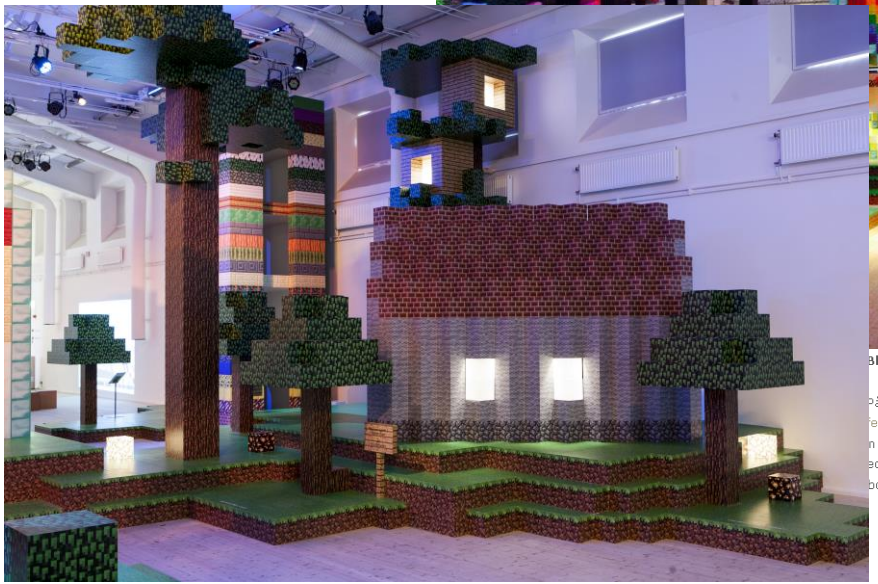
Blockholm

www. blockholm.se

Blockholm





Blockholm visas i Wien

På Open design
festivalen i Wien
n i en workshop och på
ed att få staden Wien att
borgardialog.

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Kristianstad

crowdsourcing

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GAME ON

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Cu ce lucram?

MINECRAFT

- Joc de tipul sandbox scris in Java
- Dezvoltat din 2009 de Mojang
- ~100 mil. utilizatori
- MINE – a mina
- CRAFT – mestesug, meserie
- Este axat pe creativitate folosind cuburi texturate

Cu ce lucram?

- Versiune mobila:
  - Windows phone
  - Android
  - IOS

Cu ce lucram?

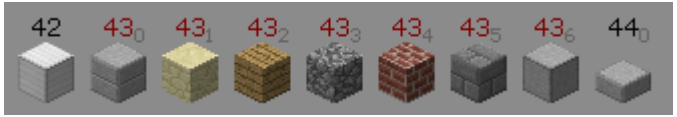
- Versiune Desktop:
  - Windows, Linux, OSX
  - PSP
  - Xbox

Cu ce lucram?

- Blocuri minecraft:
  - blockID
  - blockData

Cu ce lucram?

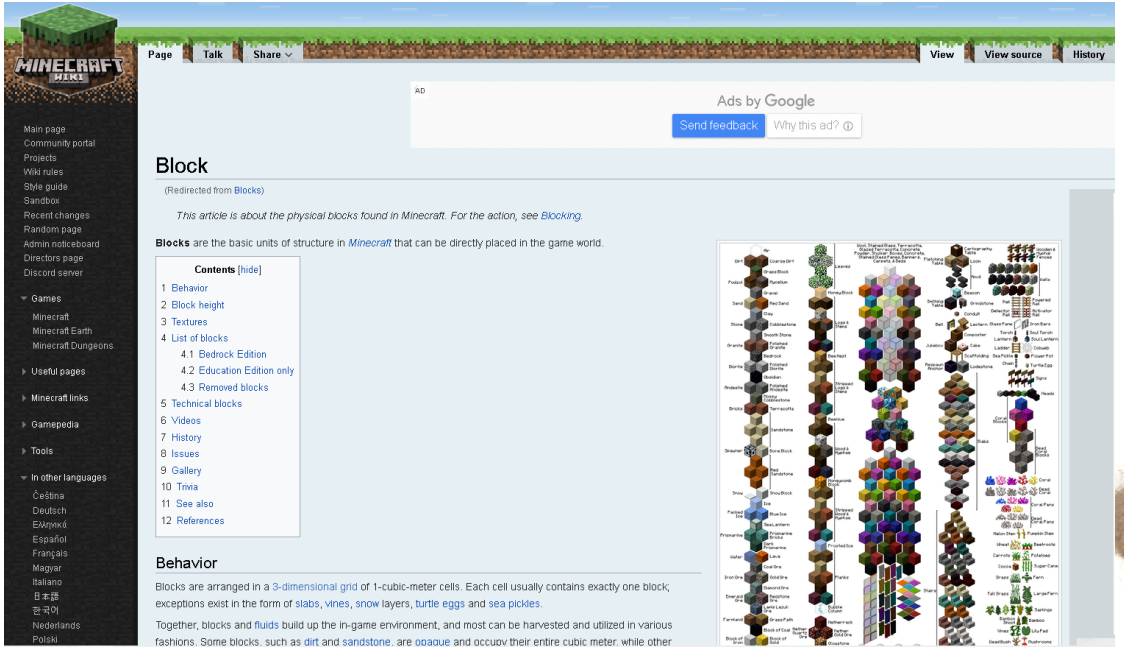
- Blocuri minecraft:
  - blockID
  - blockData



Argila
blockID = 43
blockData = 0

Cu ce lucram?

https://minecraft.gamepedia.com/Block



Cu ce lucram?

Dimensiunea hartii

- Altitudini: 1 – 265
- Nivelul marii: 63
- Ocean: 1 – 63
- Uscat: 63 - 256

Cu ce lucram?

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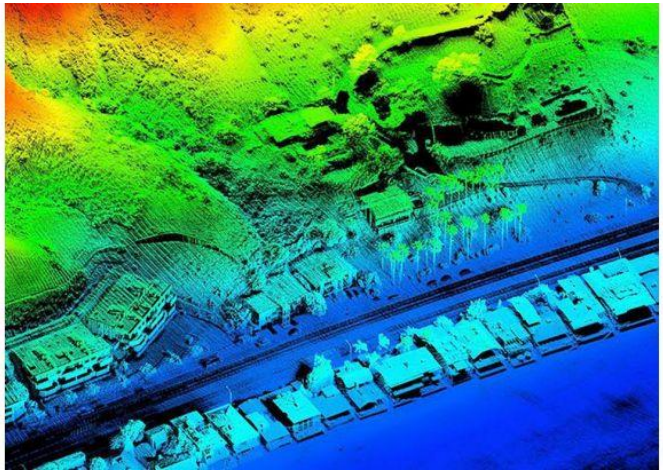


Date Point Cloud

Cu ce lucram?

- În FME, există mai multe moduri de setare **blockID** și **blockData**.
- Dacă avem deja un nor de puncte, folosind **PointCloudComponentAdder** sau **PointCloudExpressionEvaluator** pot seta direct aceste componente.
- Putem crea atribute **blockID** și **blockData** pe caracteristici vectoriale folosind **AttributeCreator**.
- Apoi, când vectorii sunt transformați în nor de puncte folosind **PointCloudCombiner.**

Workflow:

Date de intrare:

- 3D
- CAD
- Baze de date
  - Vector
  - Raster
- GML/KML/XML

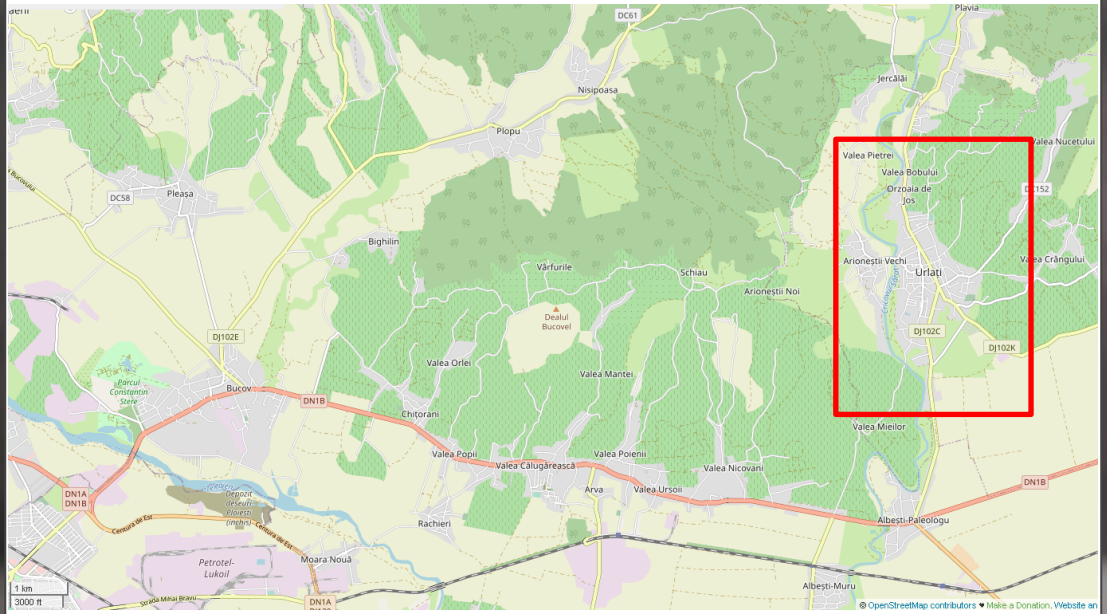
Conversie Point Cloud:

- blockID
- blockData

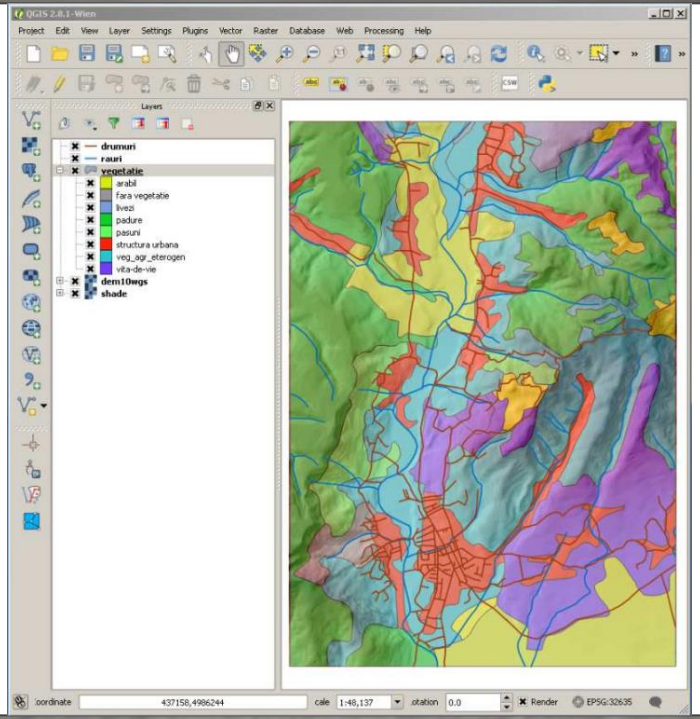
Minecraft

Scenariul 1: Date Raster + Vector

OpenStreetMap

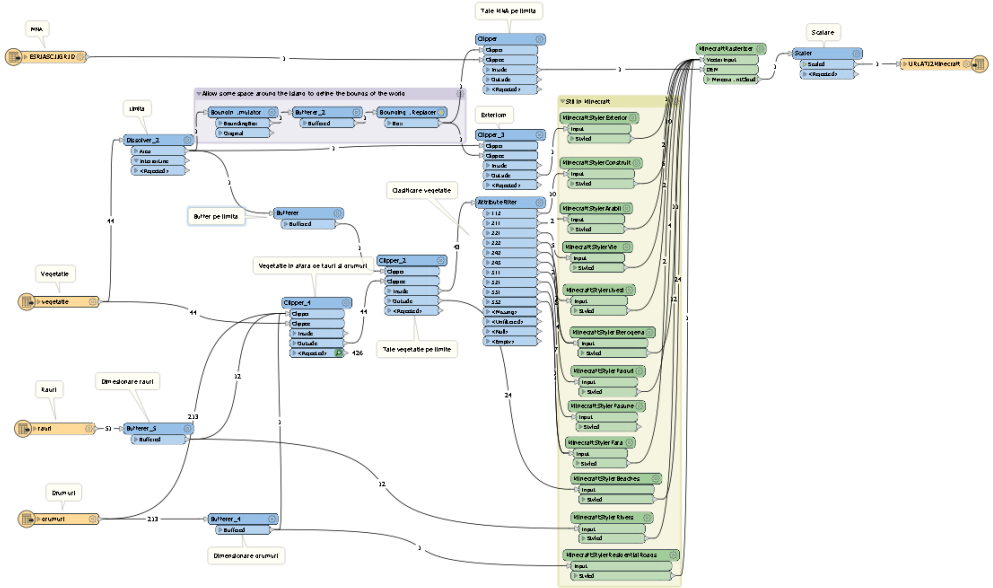


Scenariul 1: Date Raster + Vector



FME -> Minecraft

Date Raster + Vector



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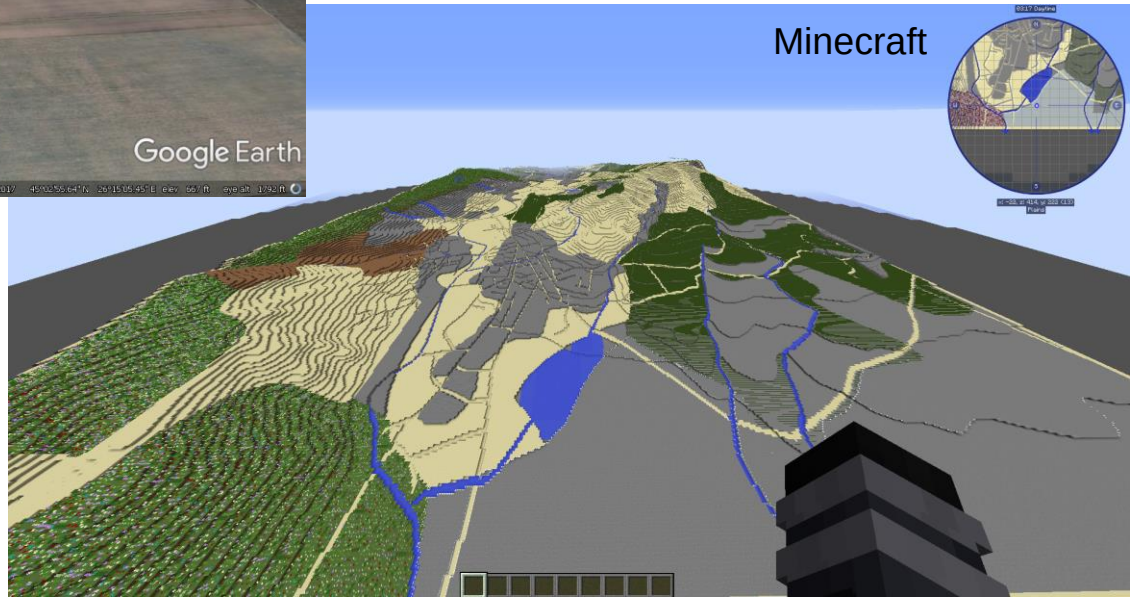
FME -> Minecraft

Date Raster + Vector

FME Session Duration:
2 minutes 35 seconds

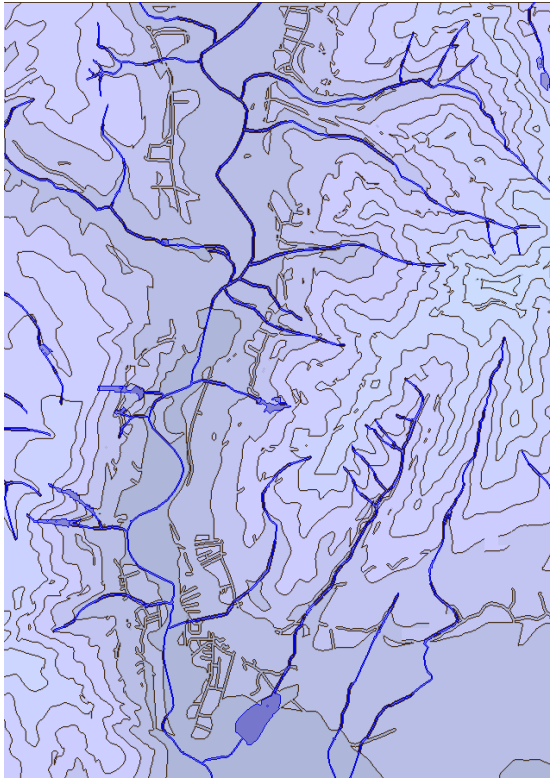
Dimensiune fisier:
29,4MB

Google Earth

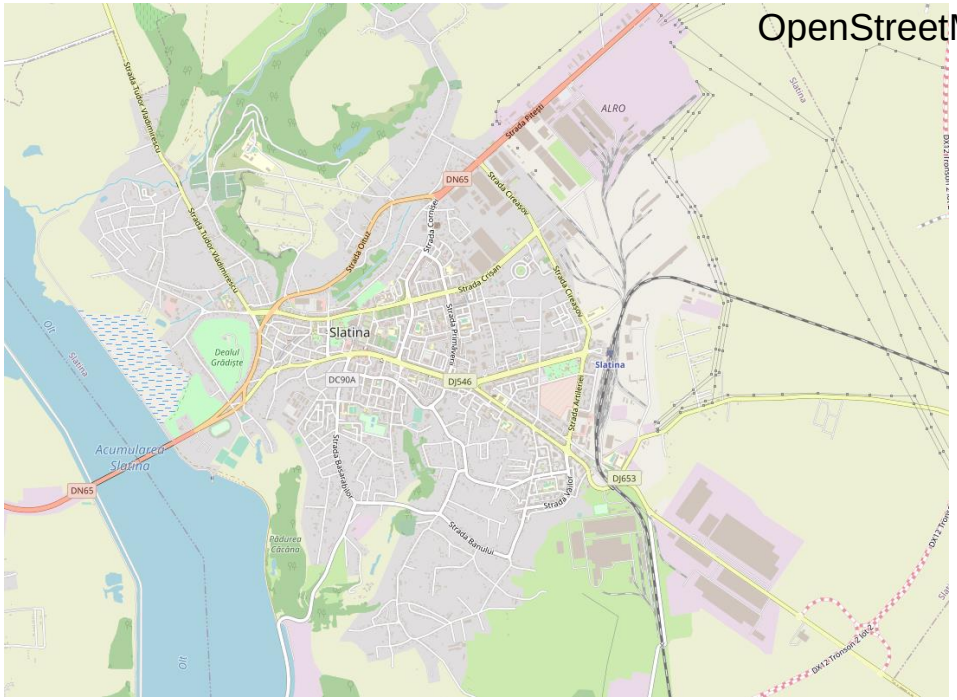

Minecraft

FME -> Minecraft

Date Raster + Vector

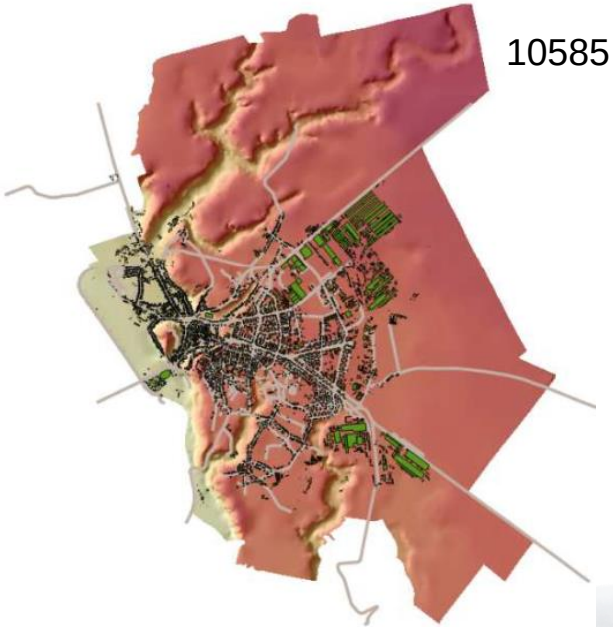


Scenariul 2: Date Raster + Vector



FME -> Minecraft

Date Raster + Vector



10585 cladiri

FME Session Duration:
3,3 ore

Dimensiune fisier:
34,8MB

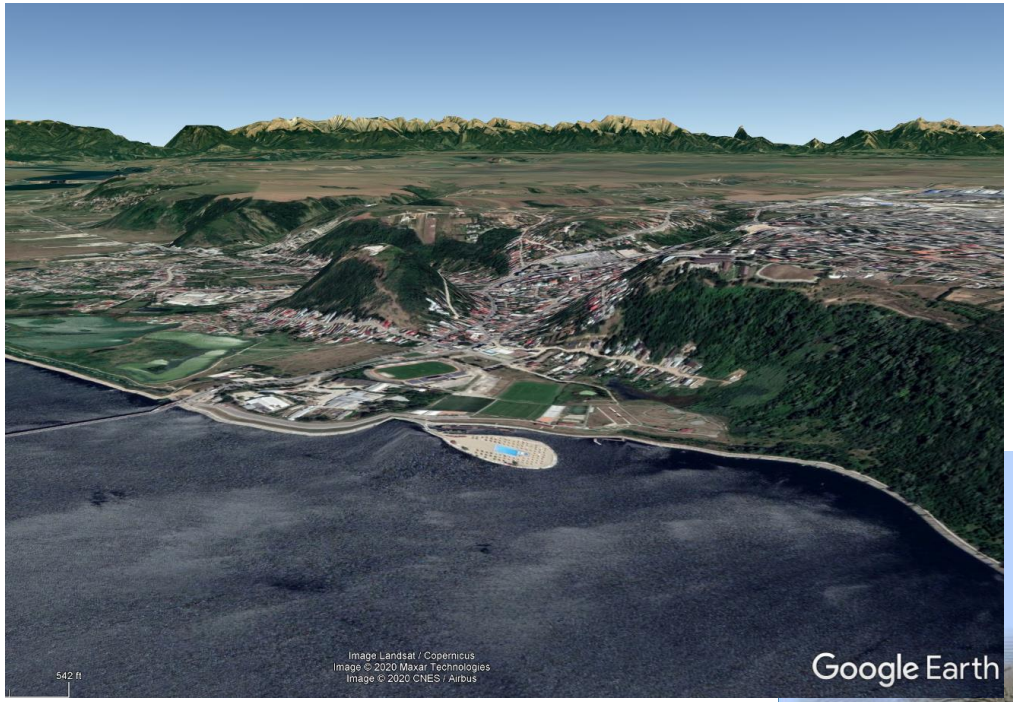
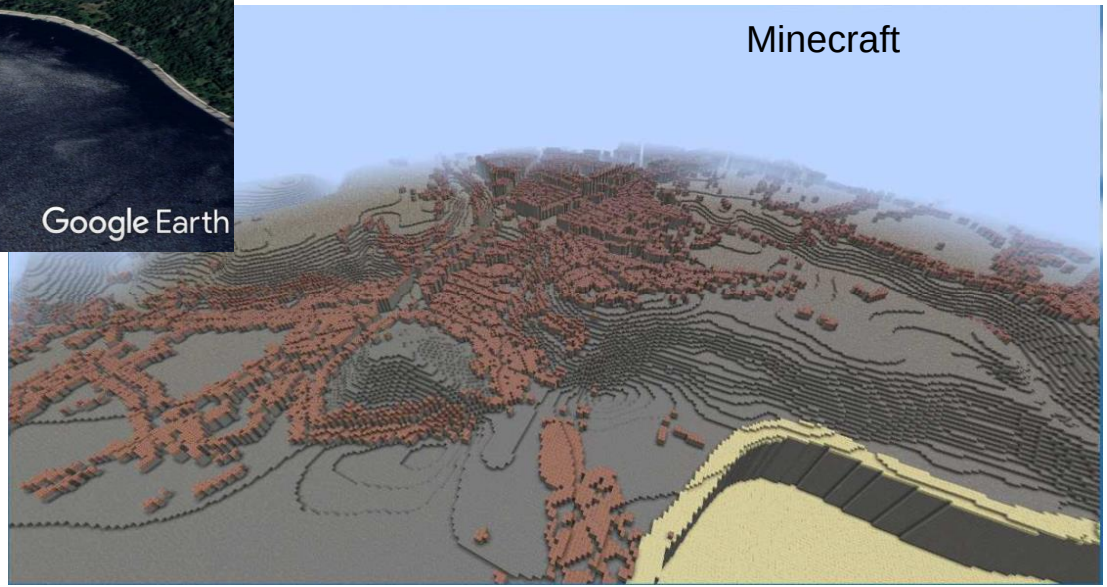


Image Landsat / Copernicus
Image © 2020 Maxar Technologies
Image © 2020 CNES / Airbus
542 ft
Google Earth


Minecraft

Concluzii:

1. Util in luarea deciziilor ce influenteaza comunitatile locale
2. Util pentru suprafete mici si cu putine elemente
3. Greu de implementat si de pus in practica

Resurse:

1. https://community.safe.com/s/article/how-to-make-minecraft-worlds
2. https://www.youtube.com/watch?v=uRYBZ6PMe4k
3. http://corneltudose.ro/wp-content/uploads/2016/09/geospatial_minecraft.pdf

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Thank you!

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dntudose@gmail.com

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