

R.E.M. Remote Environment Mapping



Montegrotto Terme
Vettore: Mikrokopter
Camera: Canon S90
GSD: 8 mm



MENCI SOFTWARE

www.menci.com

Operatività:

Sito romano di Montegrotto:

Numero di foto per coprire l'area: 172

5 strisciate

Quota di volo 25 m

Tempi di ripresa: 11 minuti

91 mila pt legame

27 milioni di punti

Pixel size 8 mm

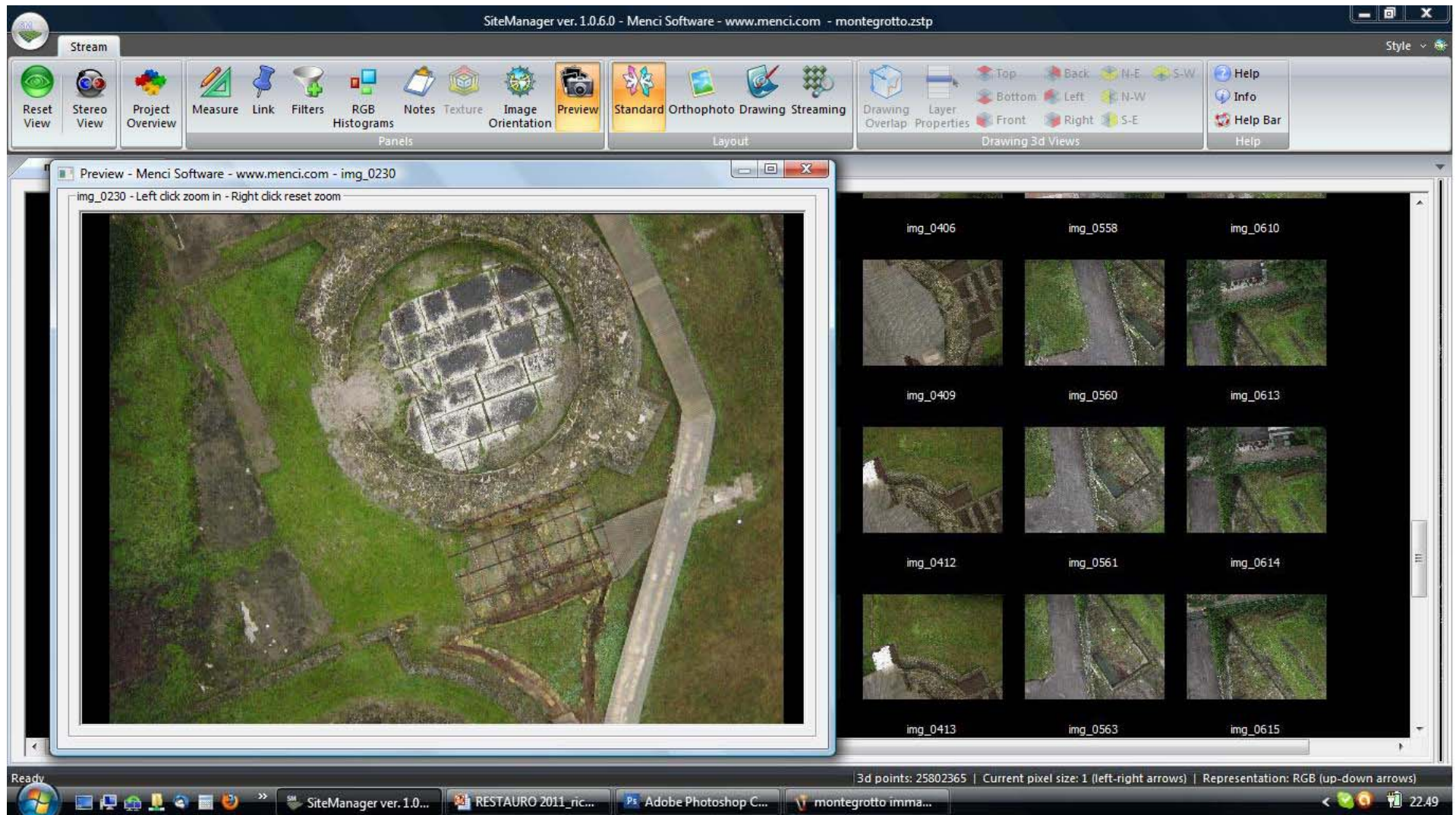


Step di ricostruzione 5 pixel = 40 mm

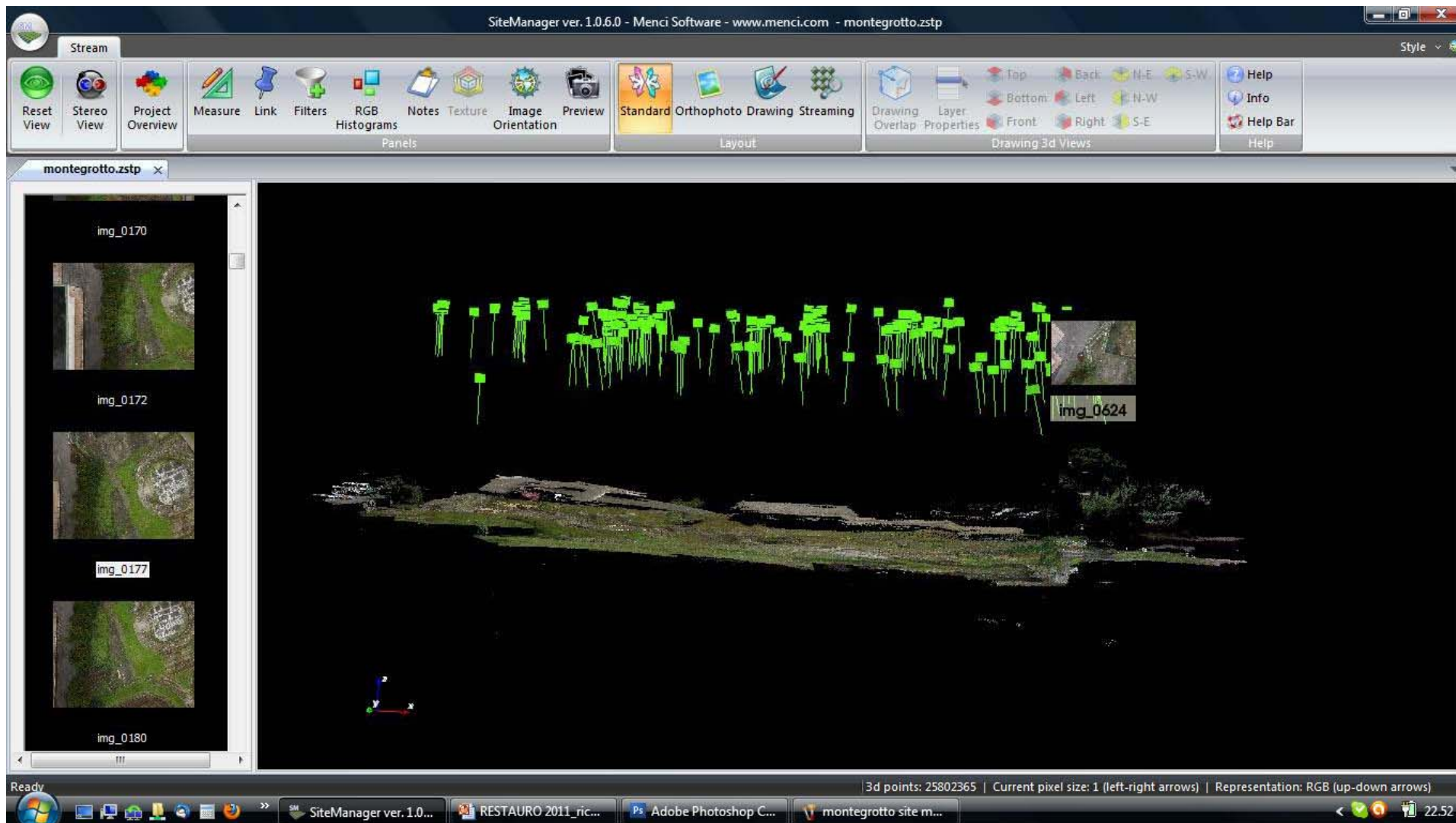


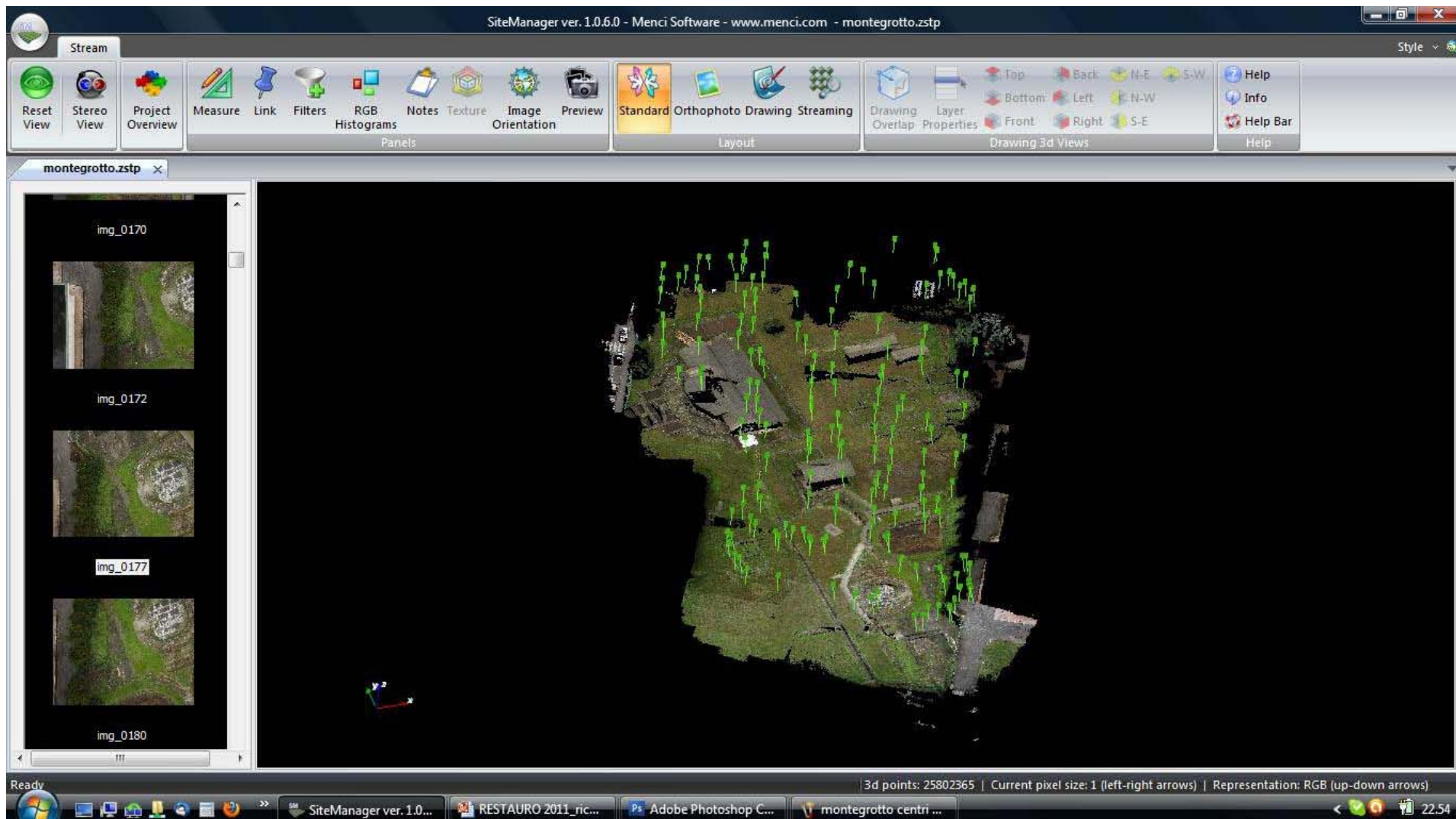
Sequenza delle immagini





Centri di presa





Modello 3d del sito







SiteManager ver. 1.0.6.0 - Menci Software - www.menci.com - montegrotto.zstp

Stream

Reset View Stereo View Project Overview Measure Link Filters RGB Histograms Notes Texture Image Orientation Standard Orthophoto Drawing Streaming Drawing Overlap Layer Properties Top Back N-E S-W Bottom Left N-W Front Right S-E Help Info Help Bar Help

montegrotto.zstp

img_0170
img_0172
img_0177
img_0180

Measure - Shift + Click to add a measure point - www.menci.com

Show measure points

ID	X	Y	Z
1	128.383	983.036	8.820
2	118.129	950.888	8.758
3	143.175	972.286	8.506
4	119.205	970.936	8.374

Select All Delete Load Save All Select only Save

Distance and Perimeter (du)
 2D 3D Distance: 90.6937 Perimeter: 105.8807

Area (du²)
 Interpolated Plane: 154.069 Current View Plane: 100.281 XY Plane: 154.059

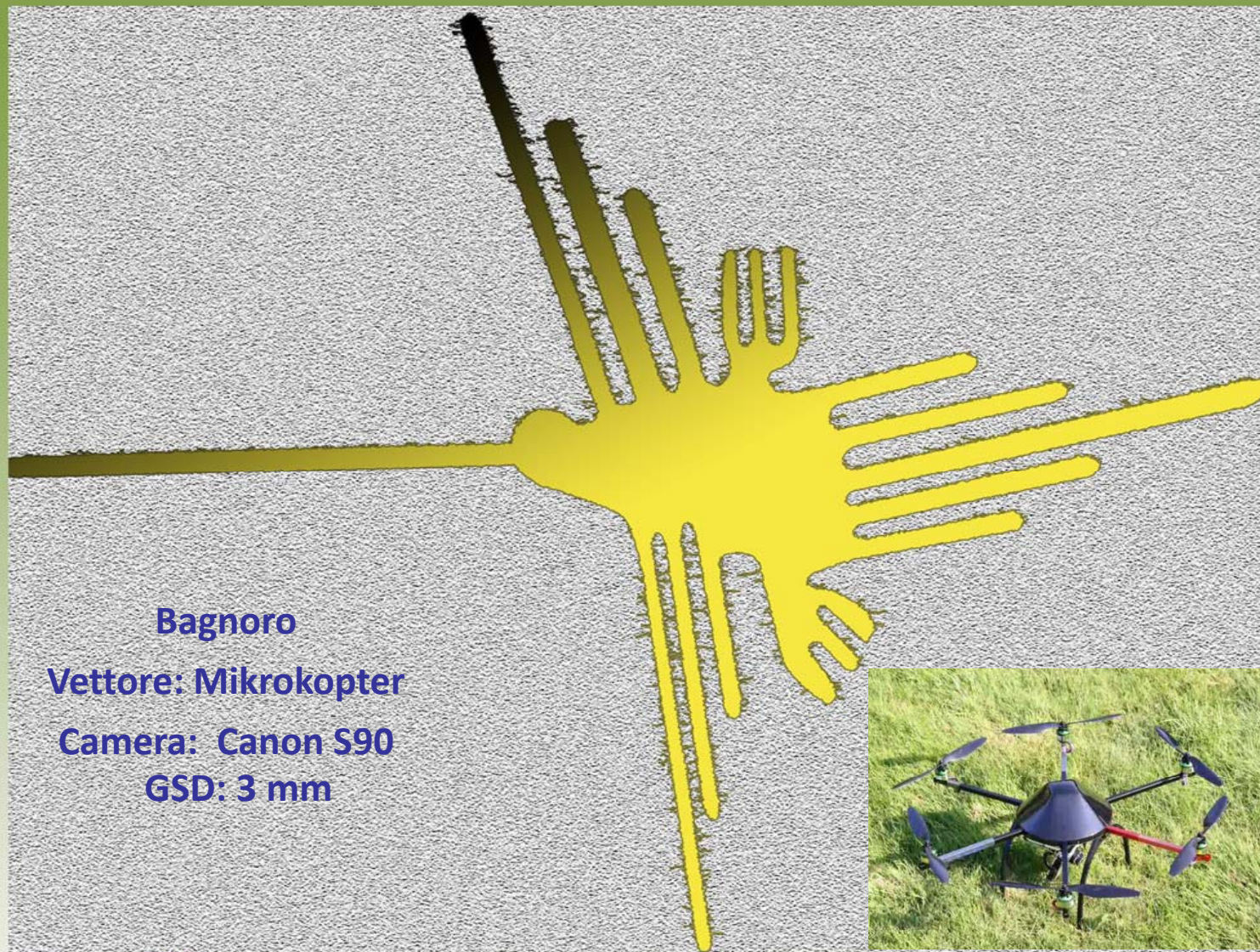
3d points: 25802365 | Current pixel size: 1 (left-right arrows) | Representation: RGB (up-down arrows)

SiteManager ver. 1.0... RESTAURO 2011_ric... Adobe Photoshop C... montegr centri di pr... SALONIA 2010 Microsoft Excel - 20... 23.06

ORTOFOTO



R.E.M. Remote Environment Mapping



Bagnoro

Vettore: Mikrokopter

Camera: Canon S90

GSD: 3 mm



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Operatività:

Pieve del Bagnoro:

Numero di foto per coprire l'area: 237

Quota di volo variabile 25 m zenit e 8 m frontali

Angolo di presa 0, 45, 90°

Tempi di ripresa: 20 minuti

191 mila pt legame

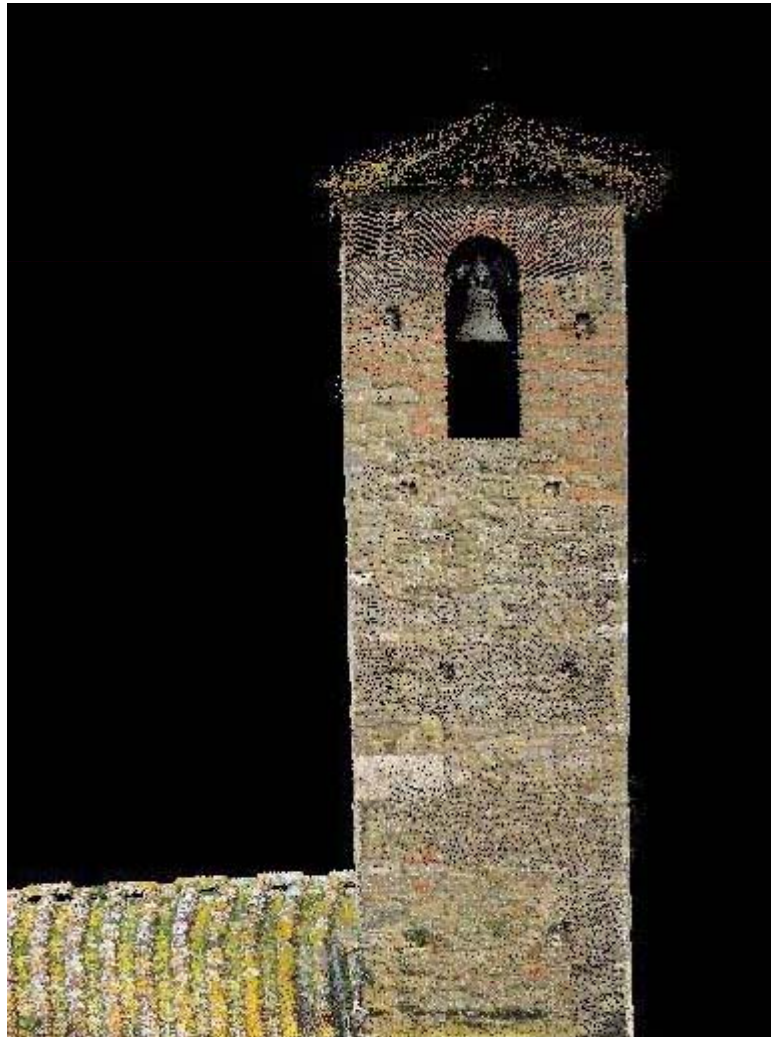
Modello denso 20 milioni di punti

Pixel size 3 mm

Step di ricostruzione 5 pixel= 15 mm

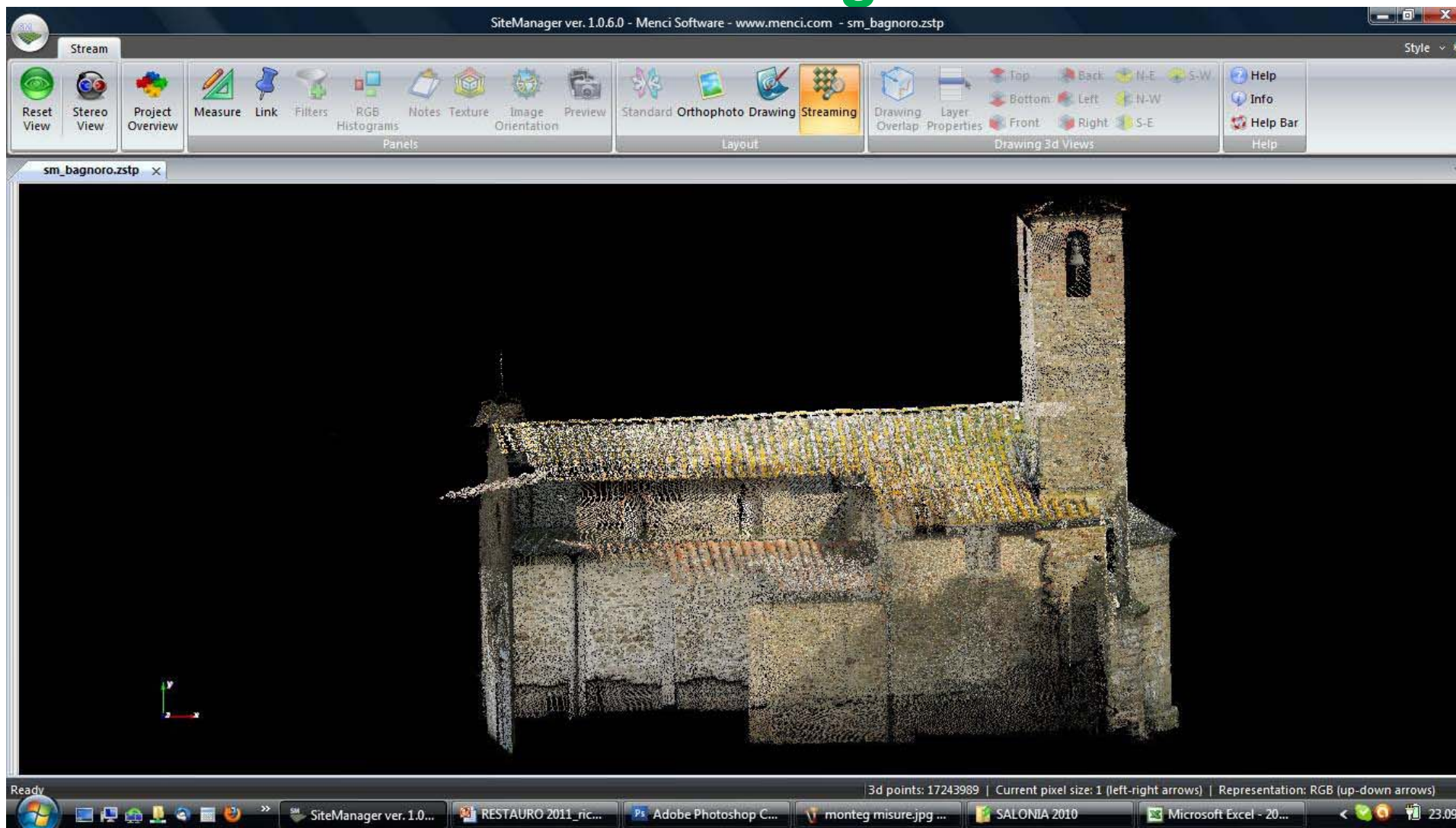
Pieve del Bagnoro (Ar)

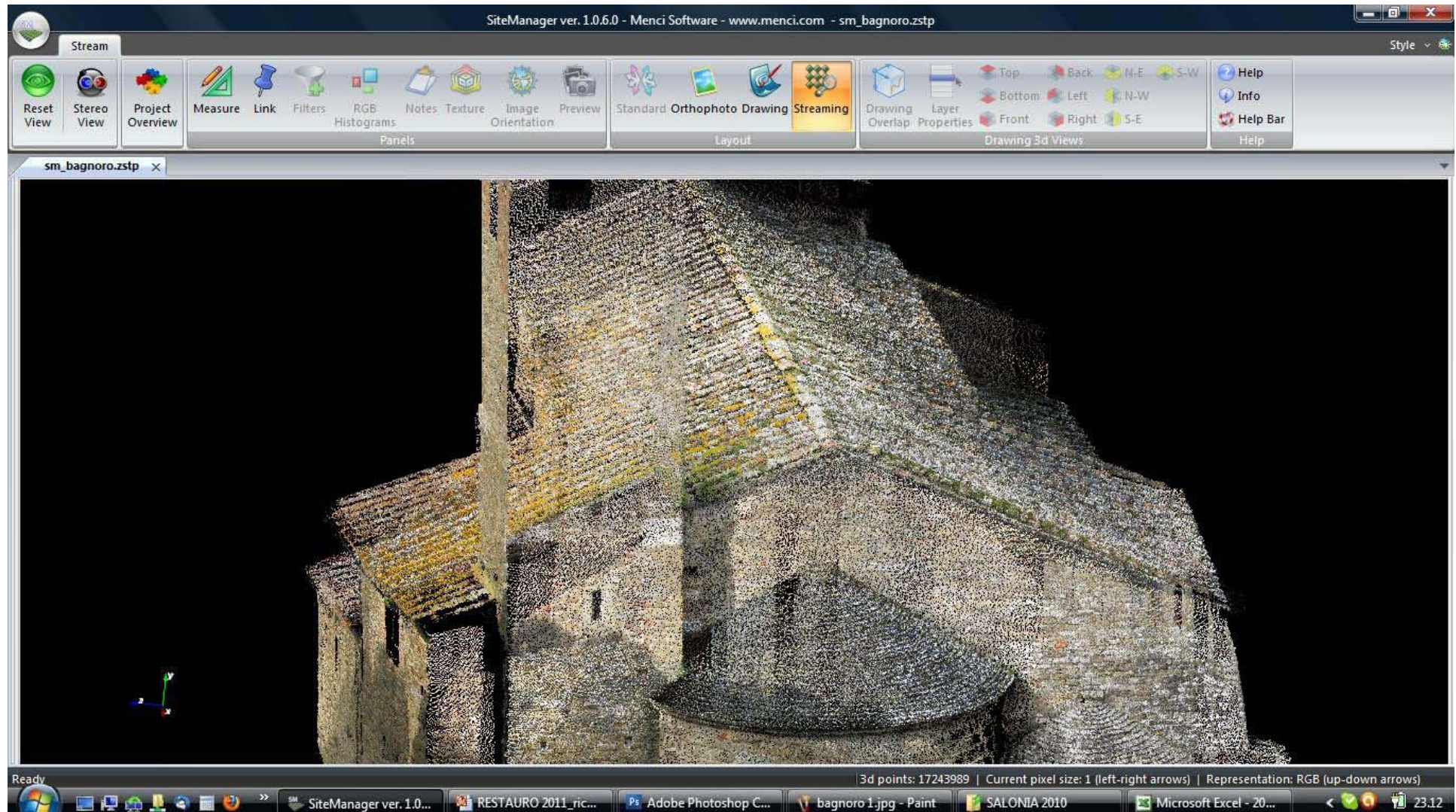




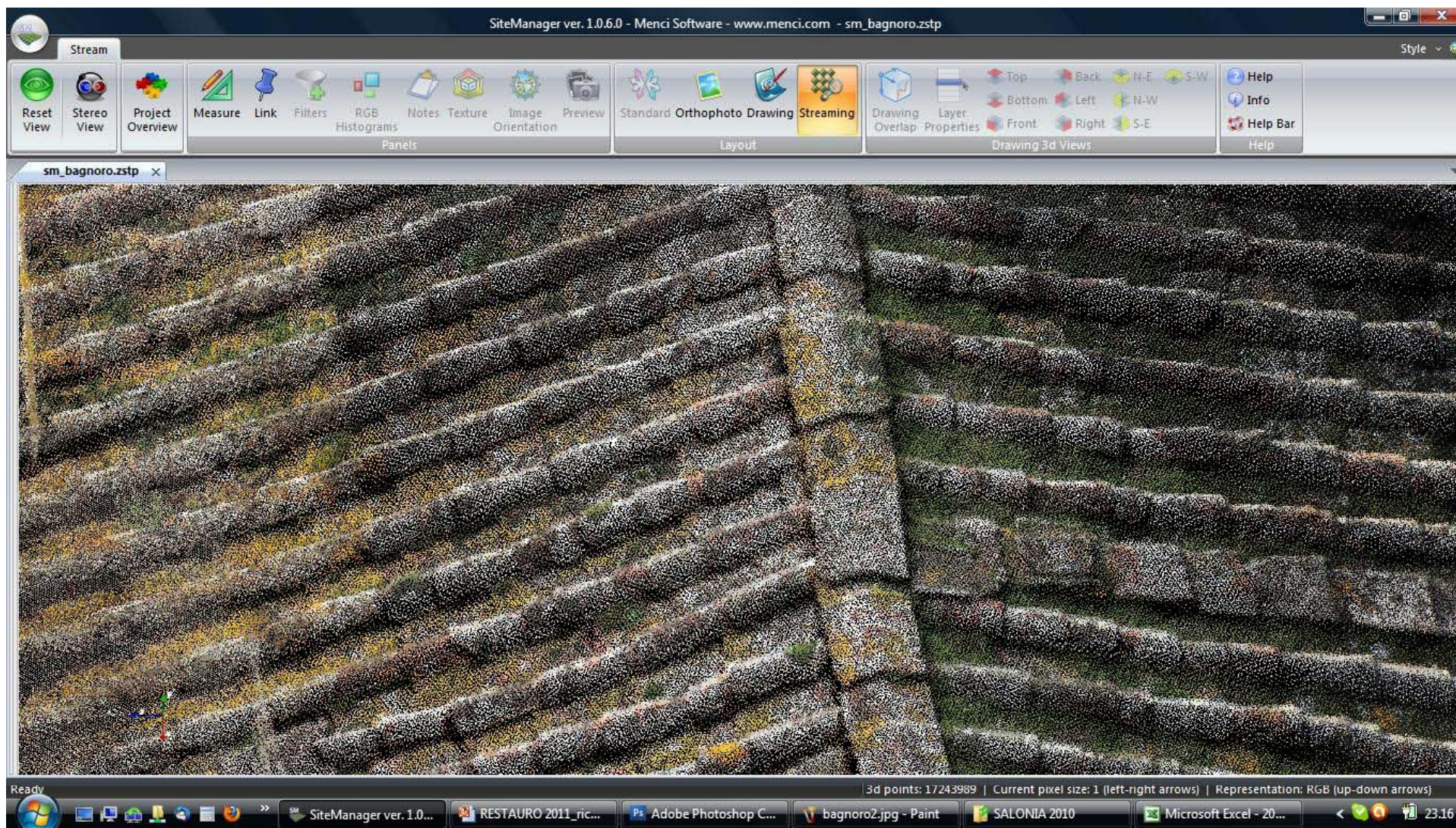


Pieve del Bagnoro





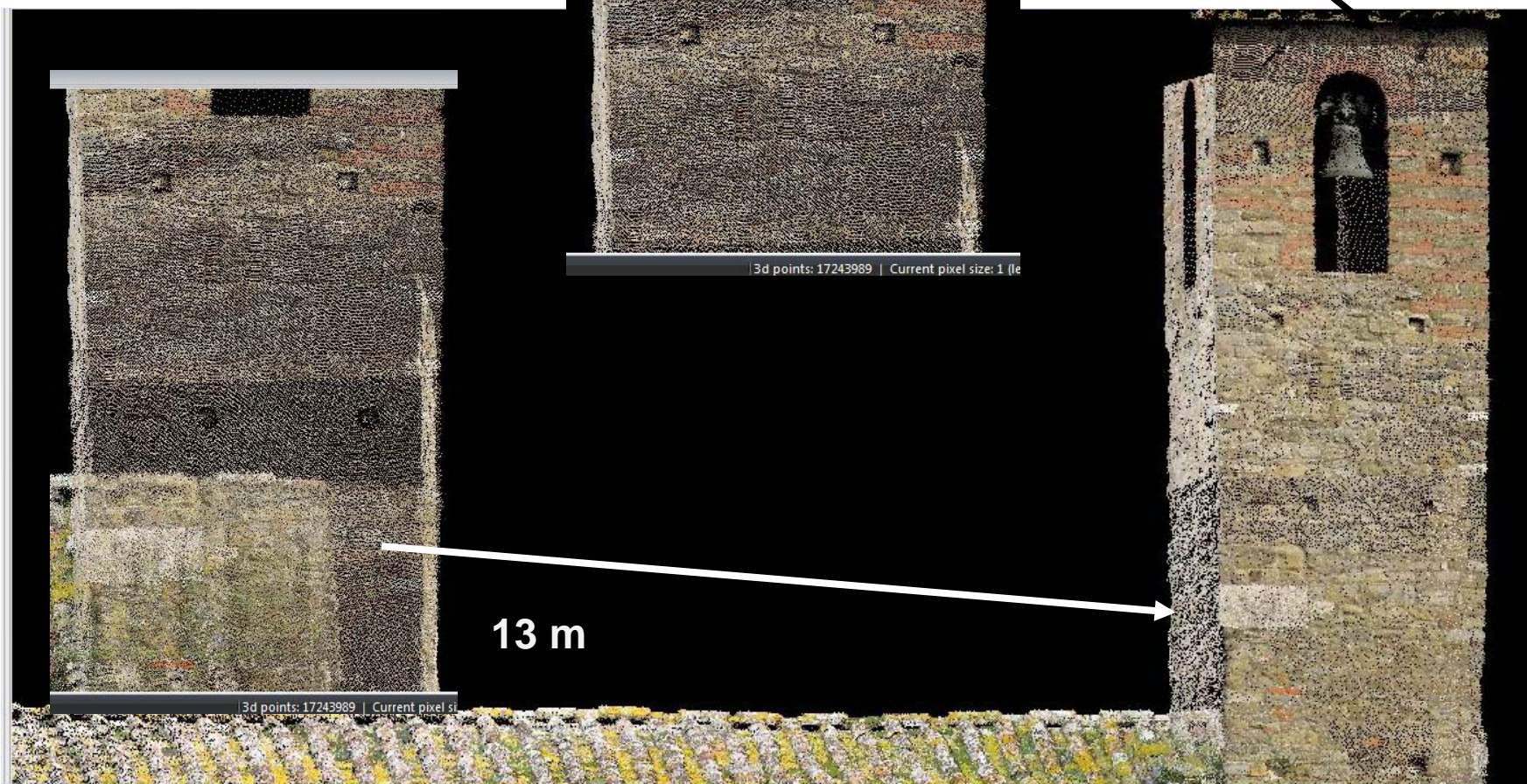
Vista dall'alto del modello 3d



Stessa densità del modello
a tutte le quote

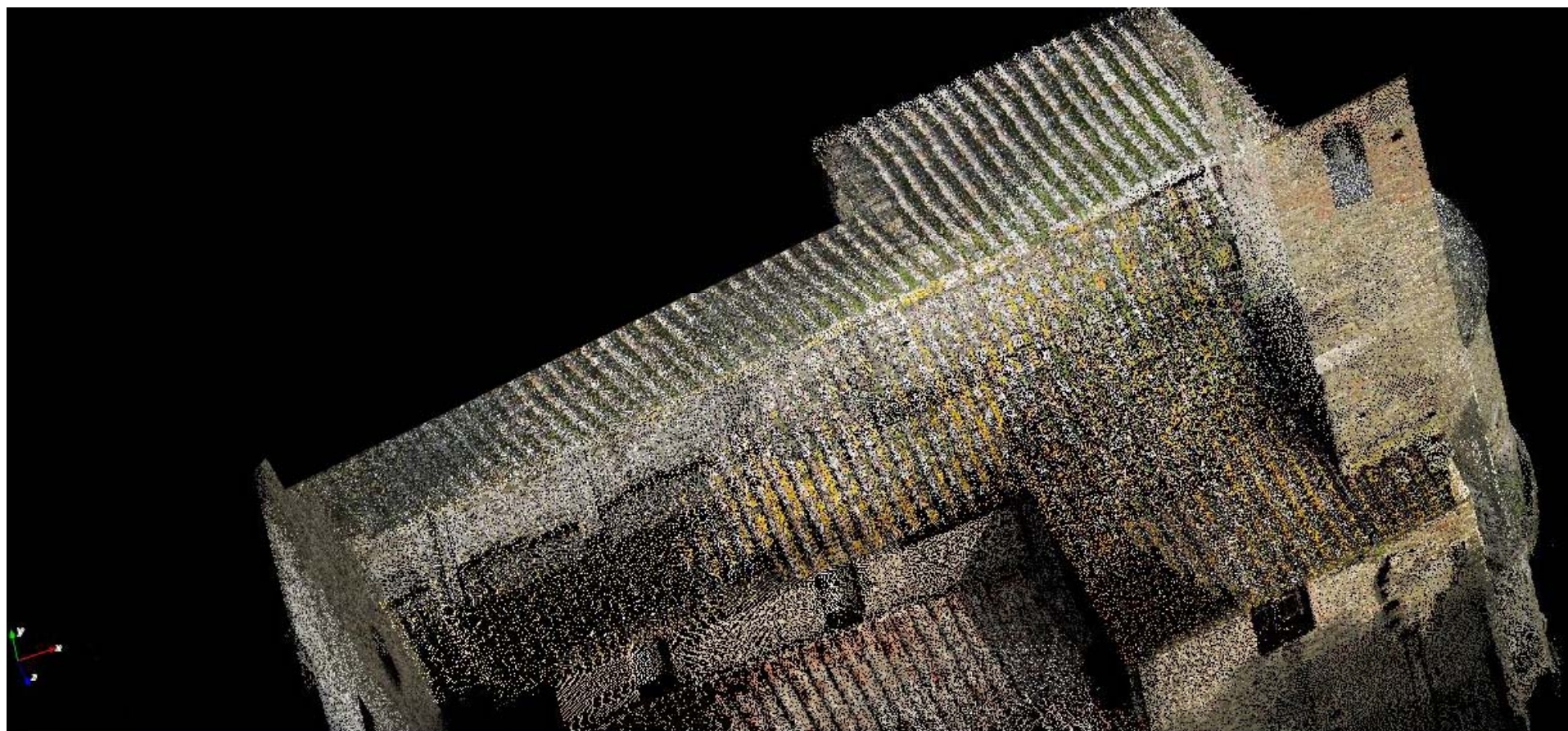


28 m



13 m

Vista dall'alto del modello 3d



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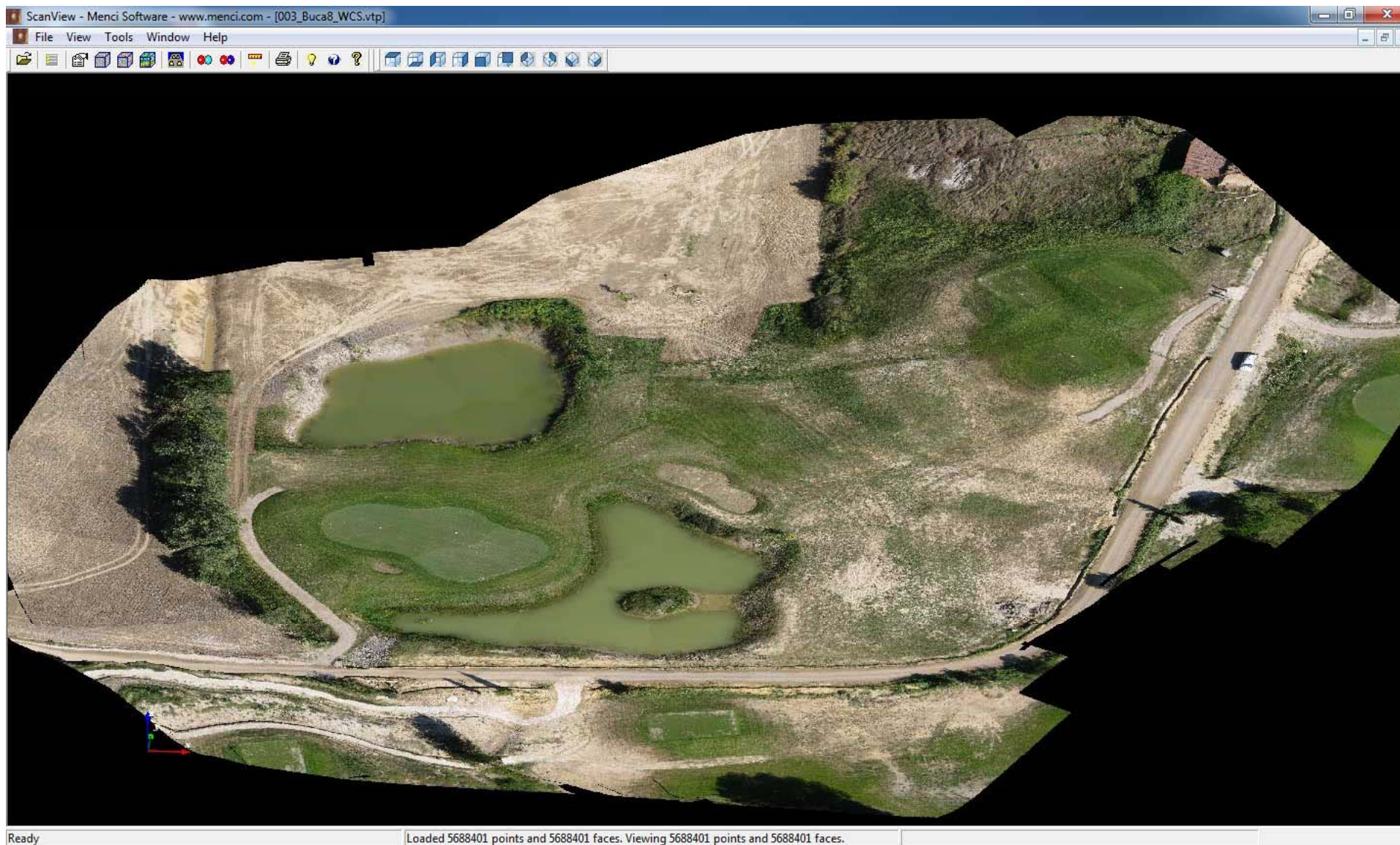
Toscana golf
Vettore: Mikrokopter
Camera: Canon S90
GSD: 15 mm



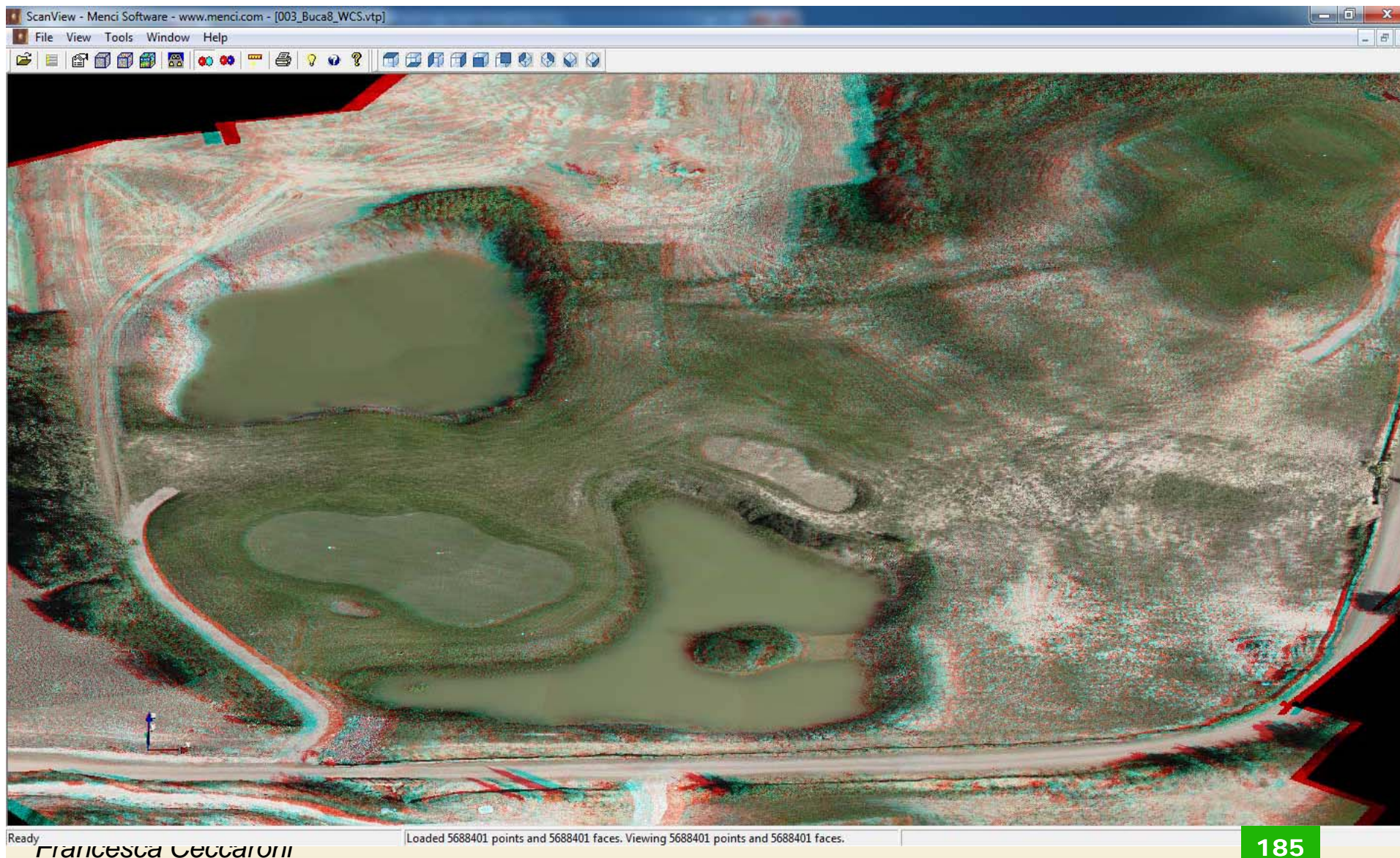
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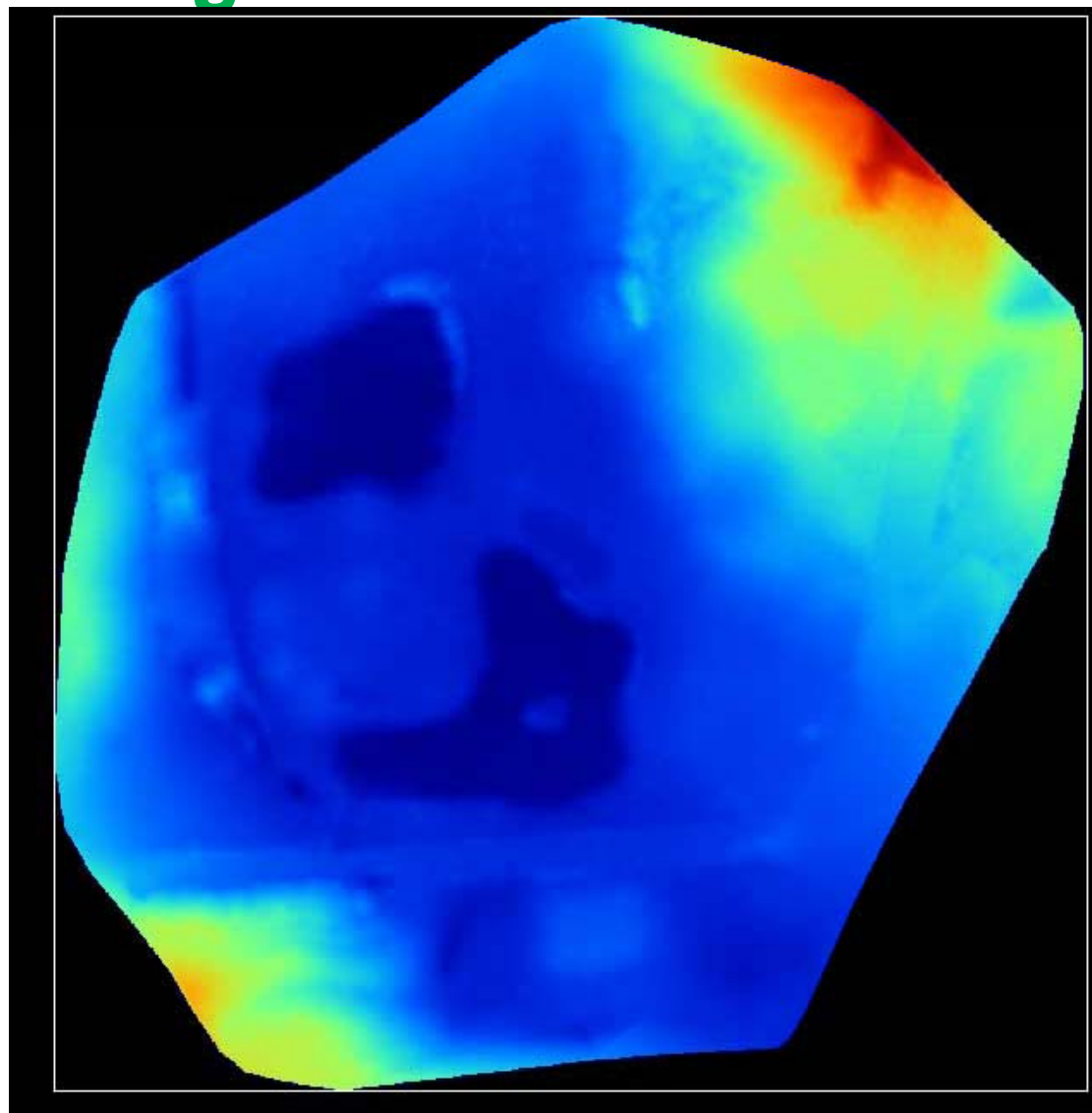
Modello 3D



Modello 3D (anaglifico)



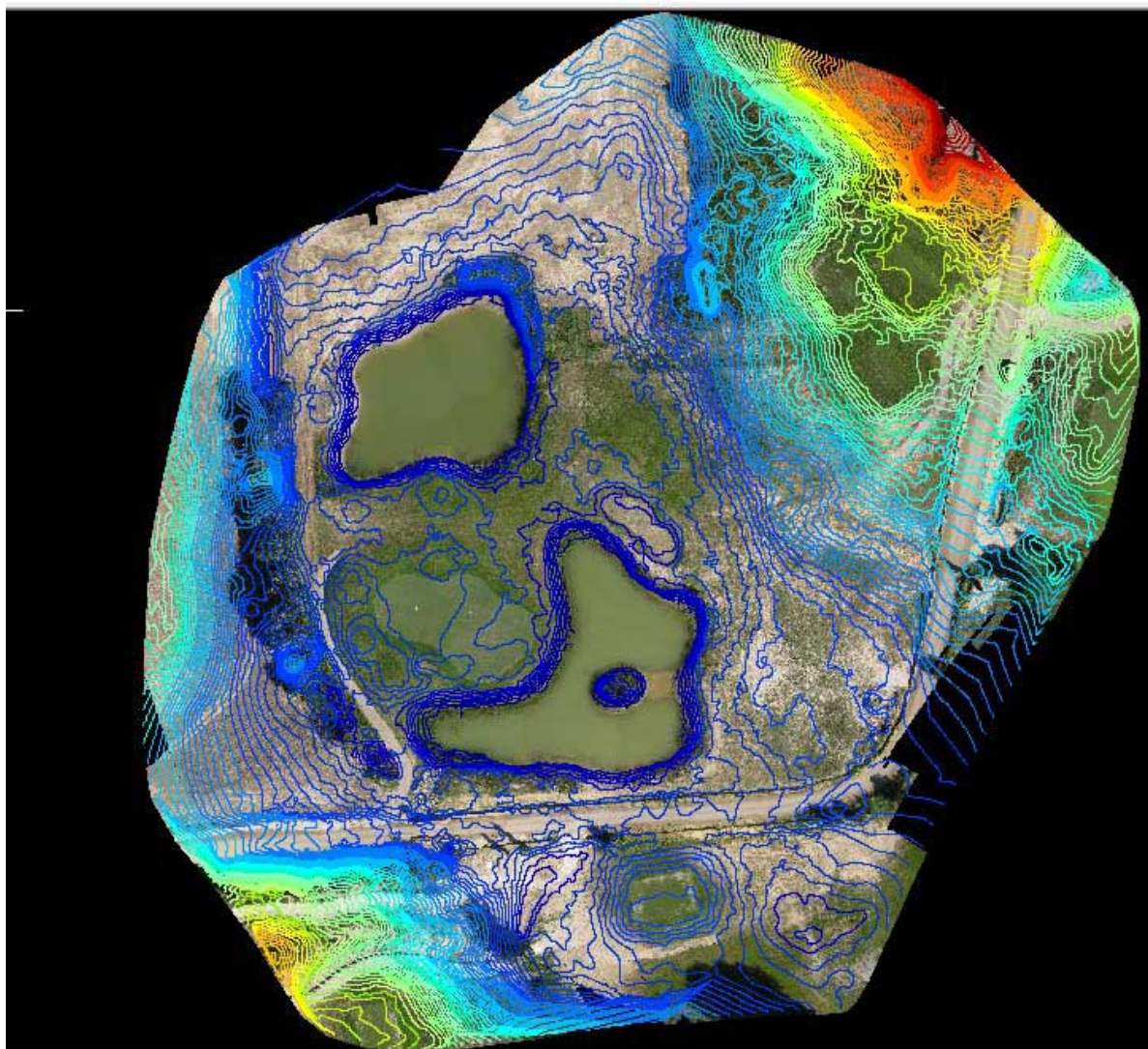
Modello digitale del terreno a falsi colori



Ortomosaico



Curve di Livello



R.E.M. Remote Environment Mapping



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Operatività:

Cava di Vicopisano:

Estensione rilevata di 20 ettari

UAV esacottero con camera calibrata Canon S90 da 10 MP

Eseguite 13 strisciate con angolo 0 o 45°

Quota di volo 100 m dalla superficie da rilevare

Rilievo Topografico a terra di 15 GCP

Tempi di ripresa: 43 minuti

Scaricamento dati nel server

Processamento dati in automatico con sw proprietario

Pixel size 30 mm

Step di ricostruzione 15 cm

Tempi di calcolo: 12 ore

Dati Oggettivi del Rilievo

369 foto da UAV

23 Foto da terra

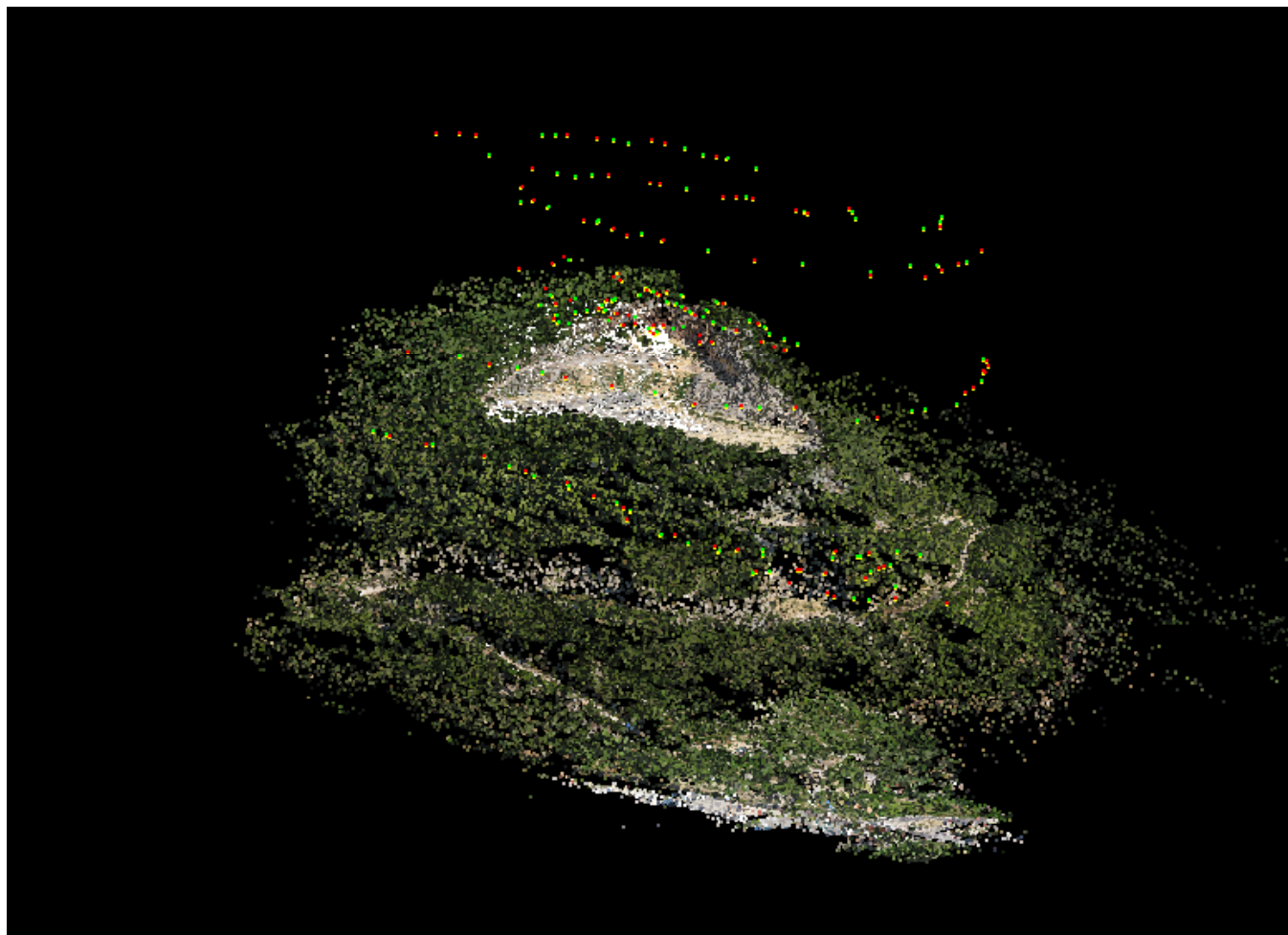
15 punti di controllo



Modello 3d da

40 milioni di punti

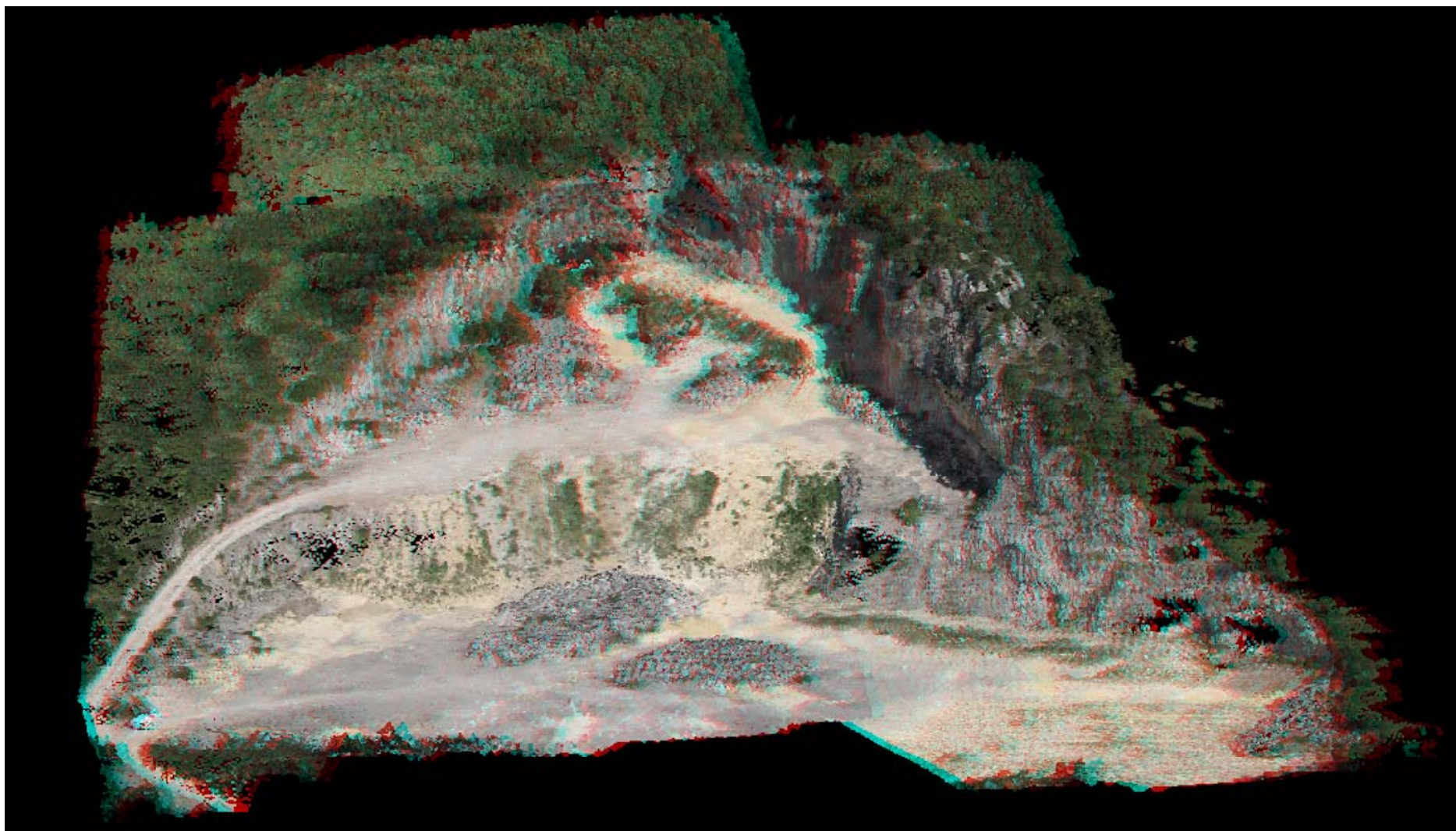
Modello 3d ridotto con centri di presa



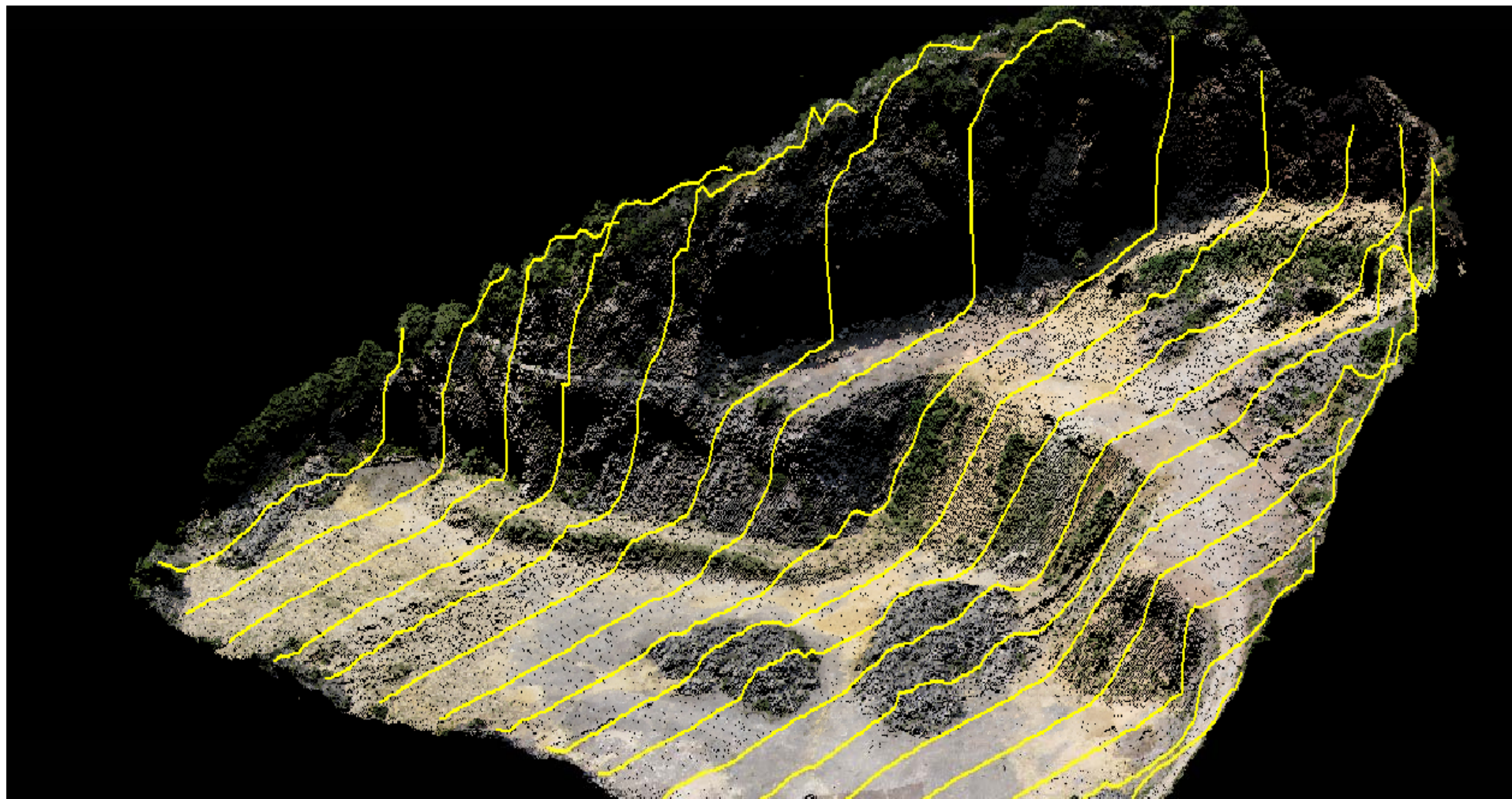
Modello 3D complessivo



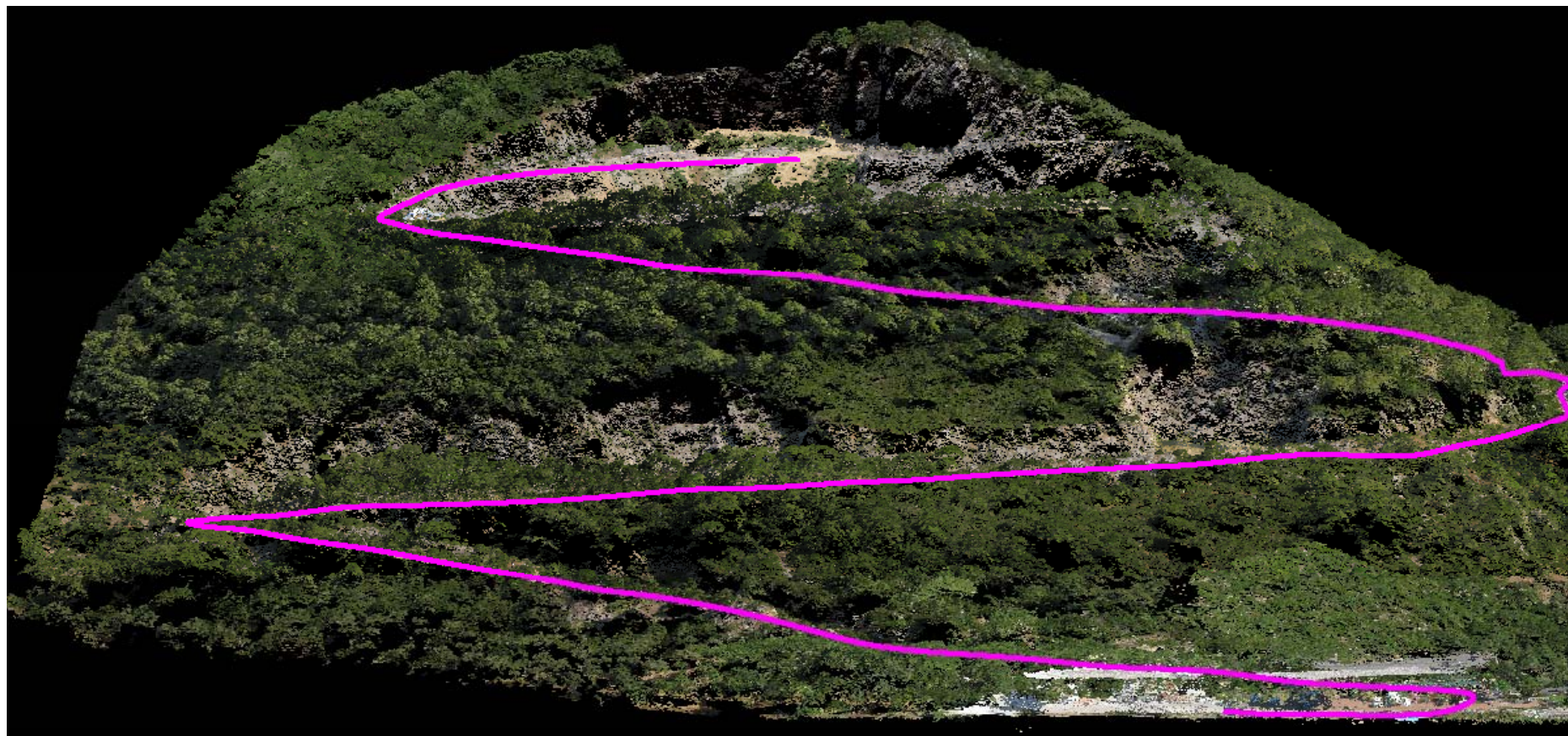
Modello 3D anaglifico



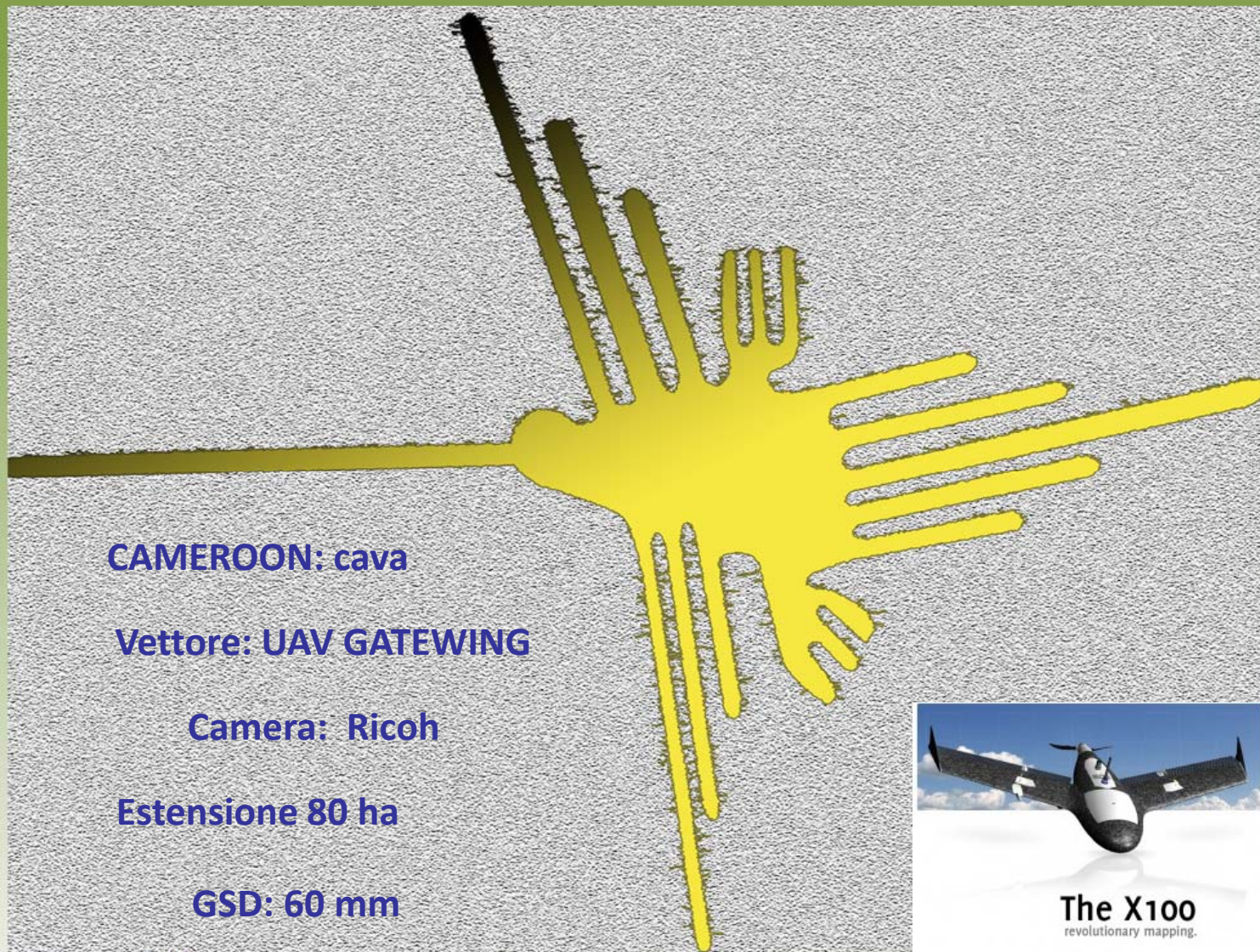
Elaborati: Profili



Asse stradale vista frontale

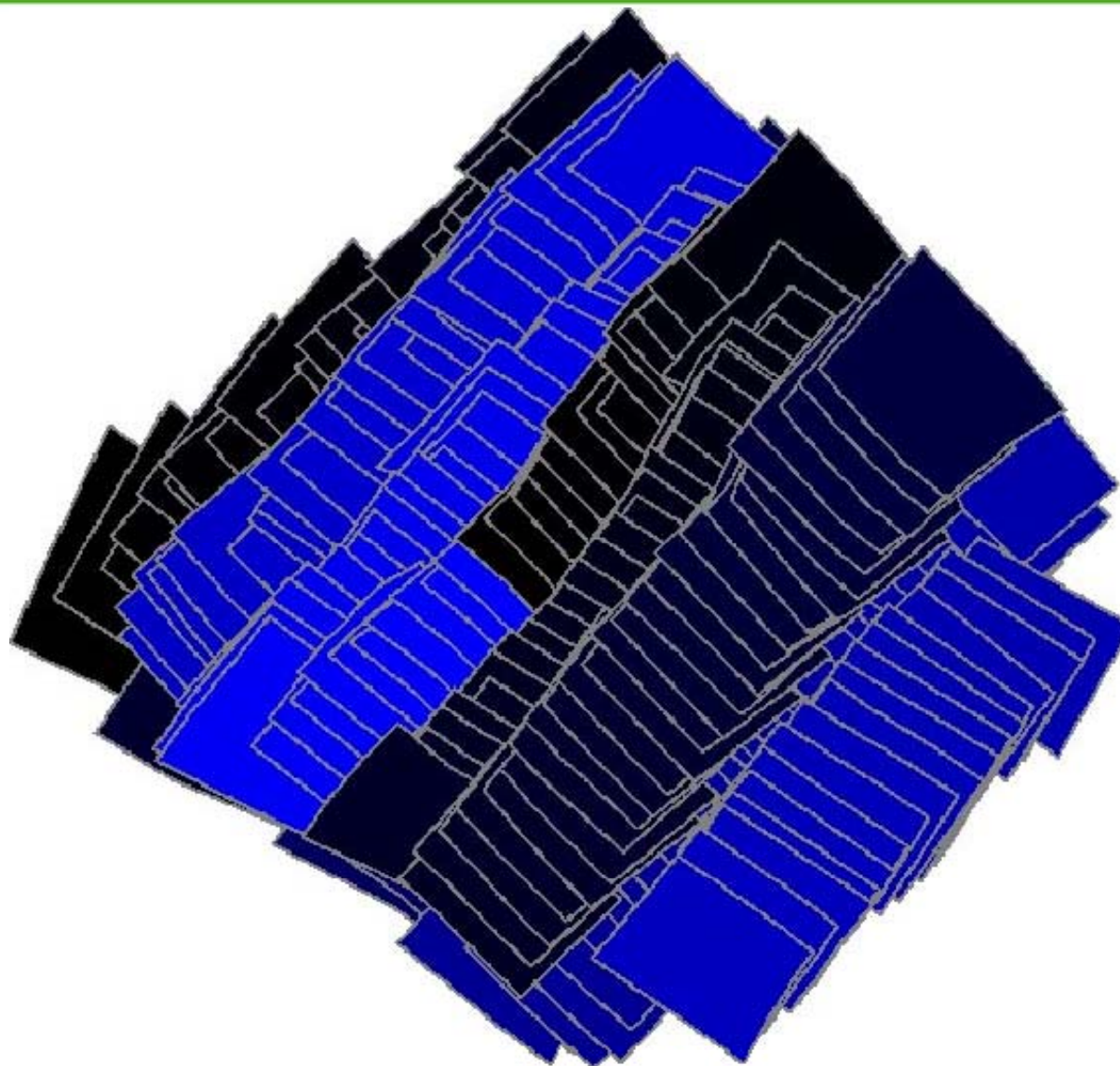


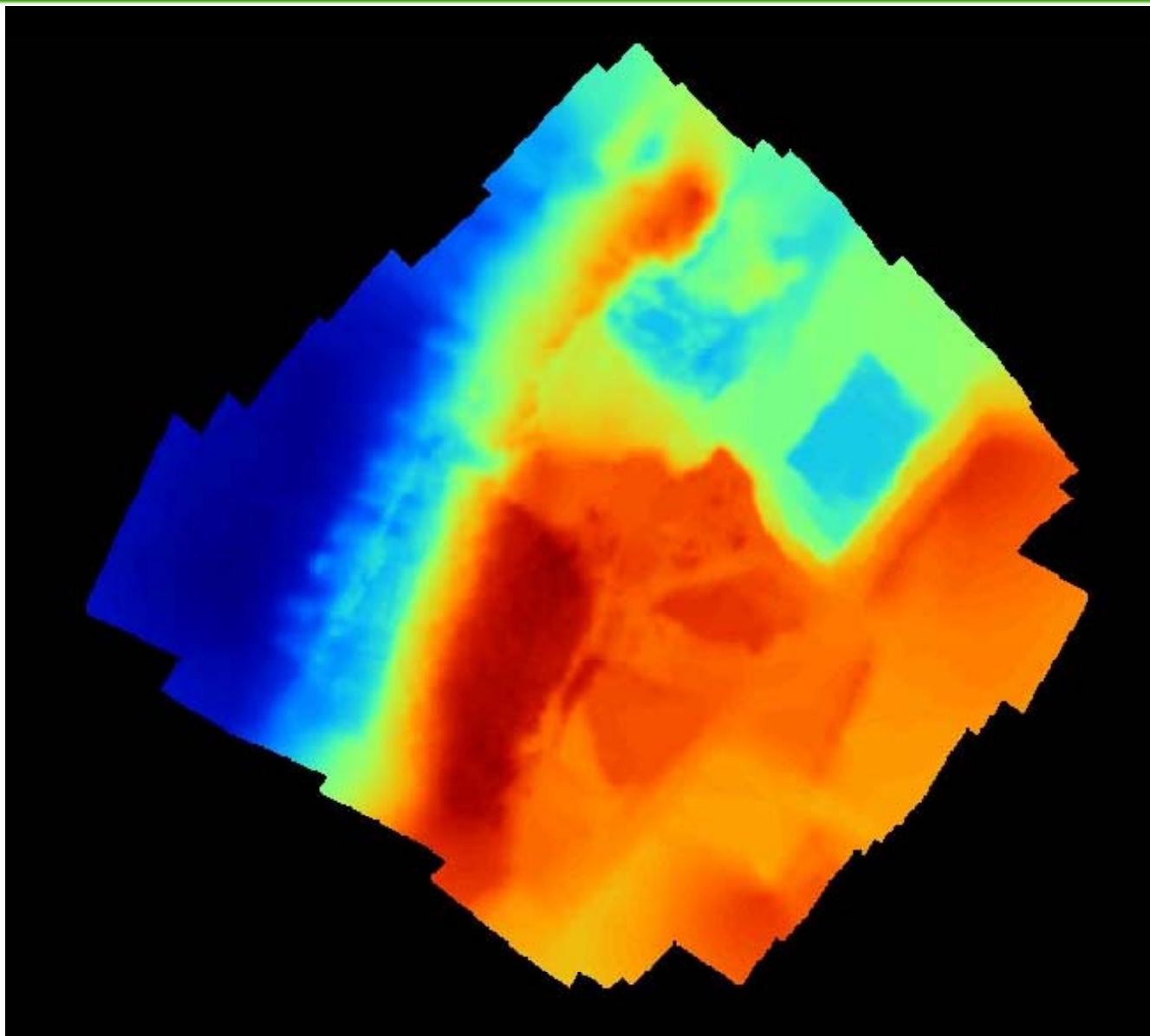
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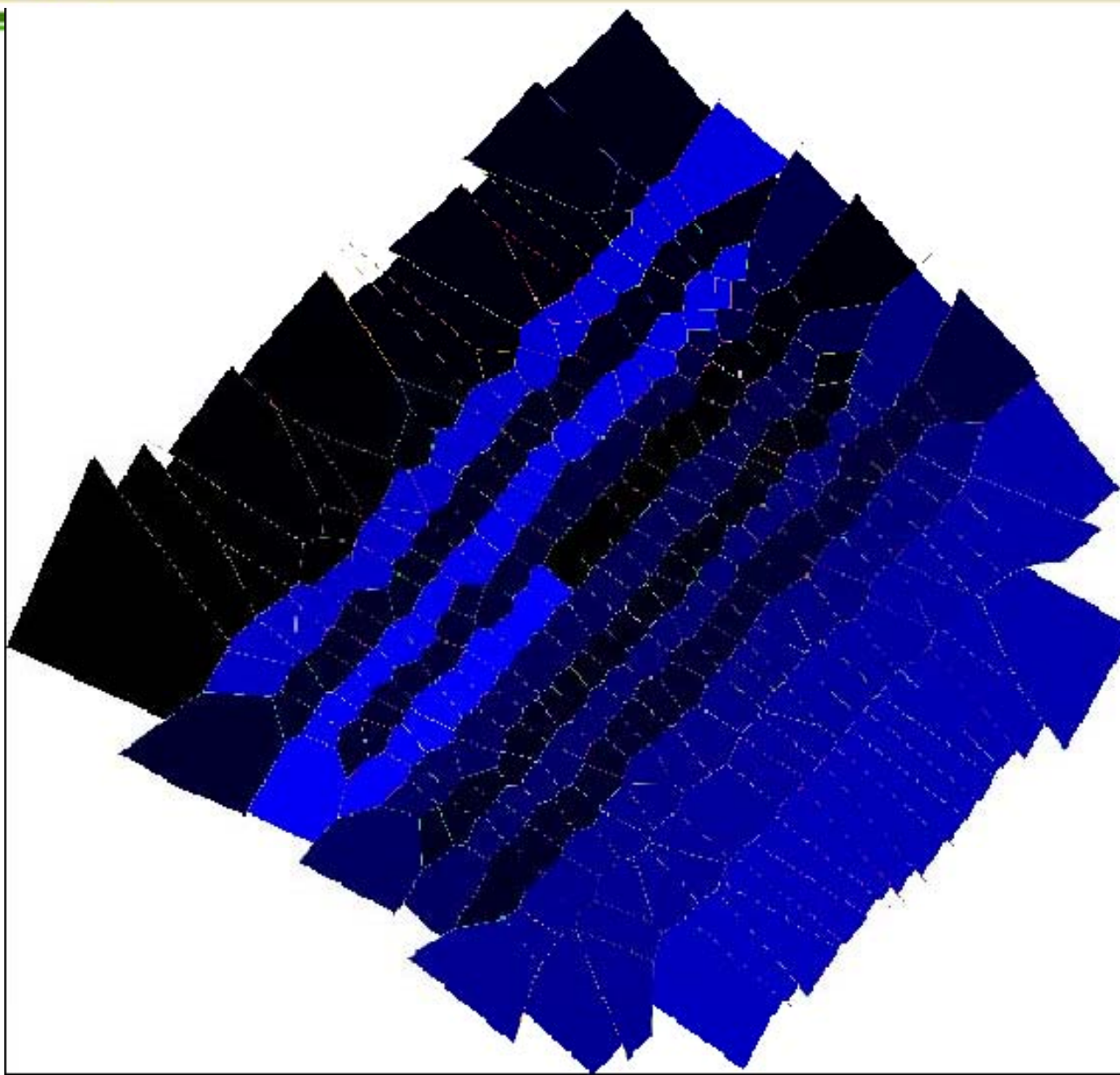


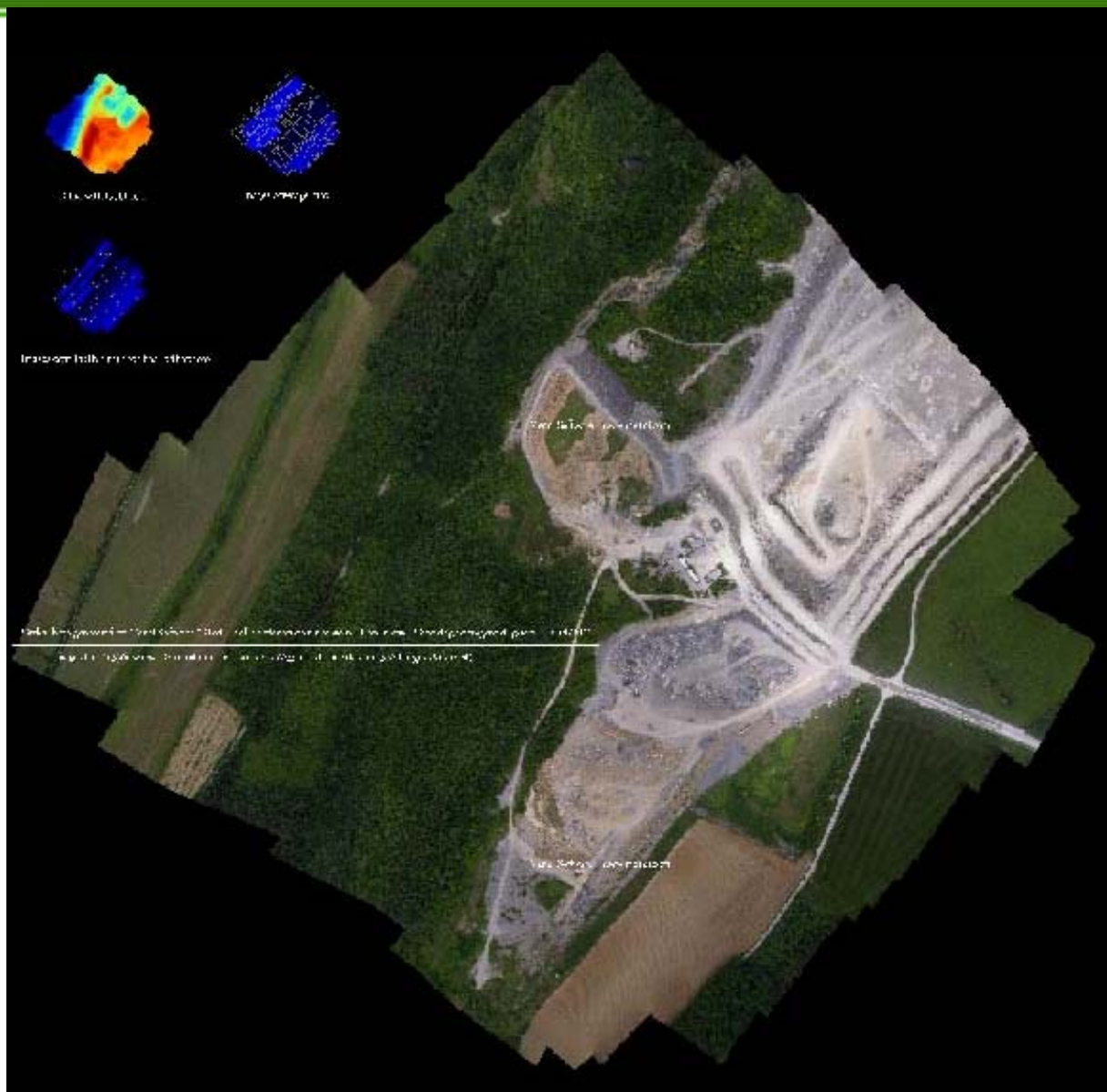
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Veicoli con pilota

Vettori per le acquisizioni fotografiche



Hasselblad, Nikon, Ricoh, Canon, IR Flir per
Immagini a colori reali, multispettrali,
termiche

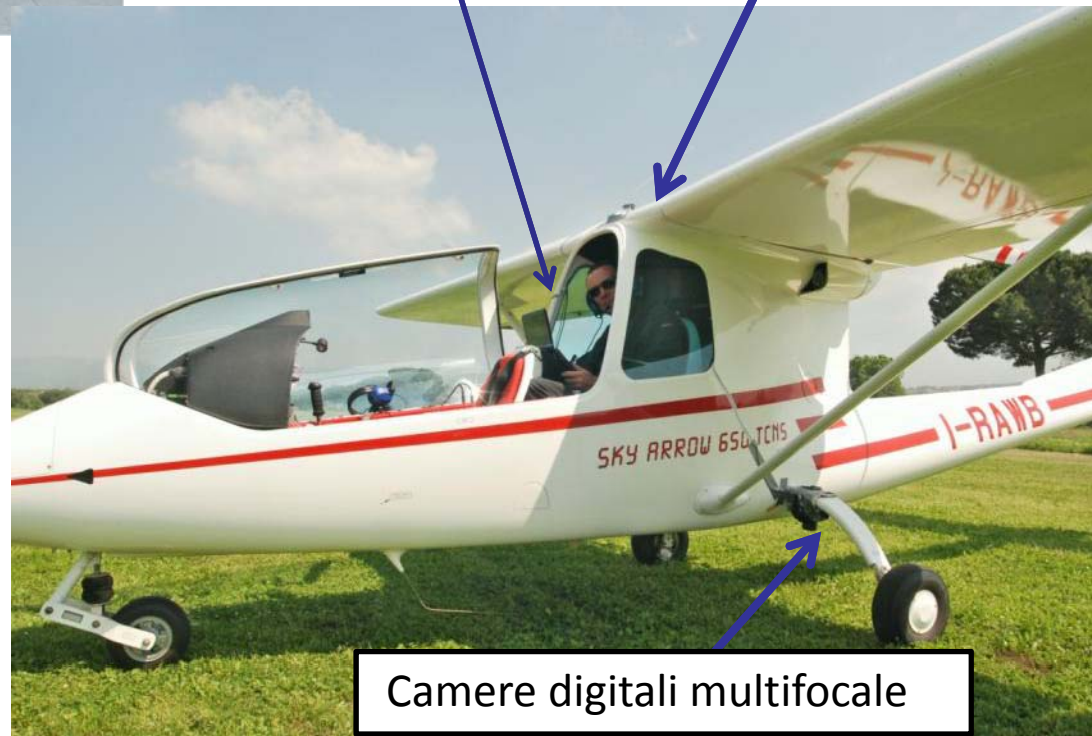




AEROMOBILE
CERTIFICATO

Computer di
bordo

Antenne GPS

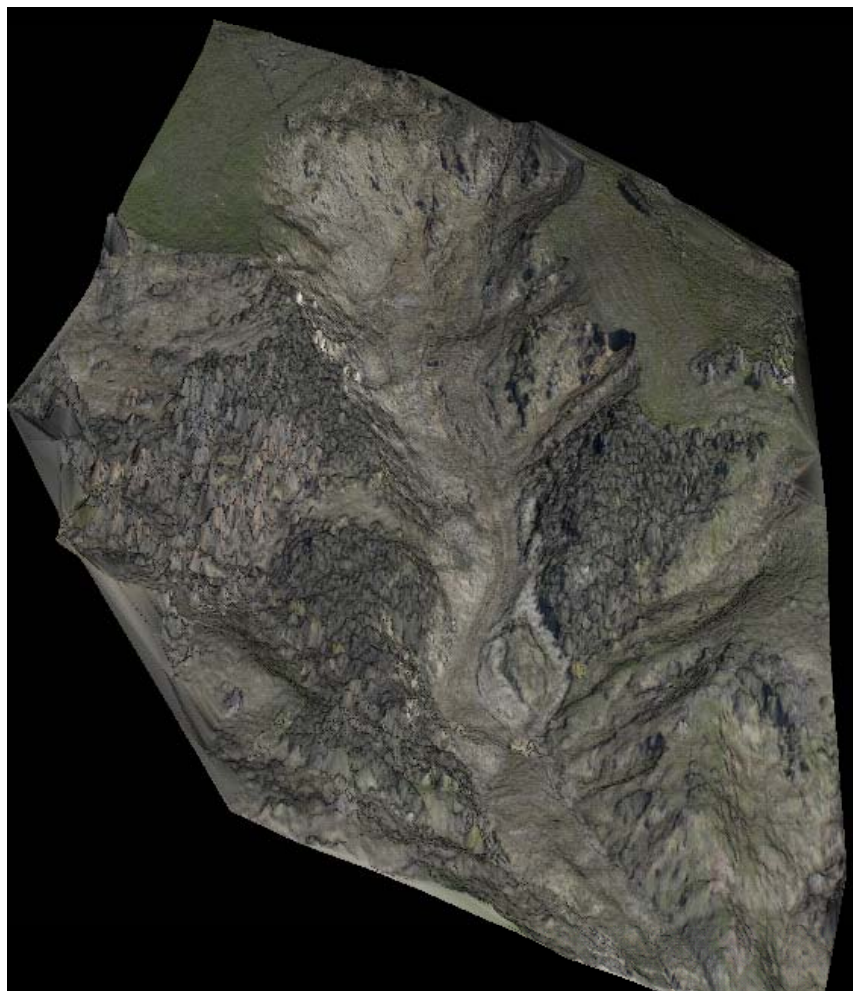


Camere digitali multifocale

Esempio 3d Sito Ambientale-Culturale



Esempio 3d Sito Dissesto Geologico





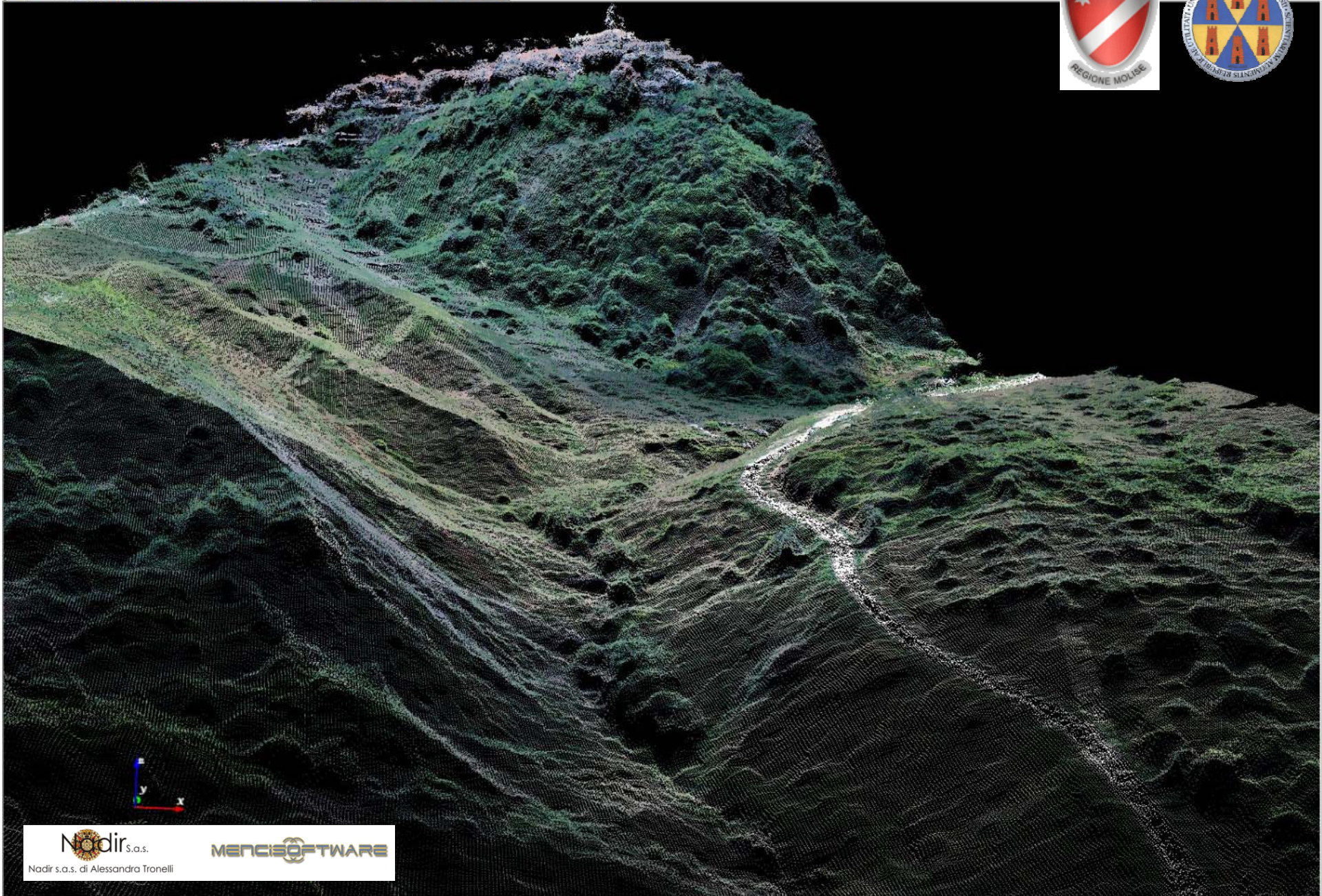
 **Nadir** S.o.s.
Nadir s.a.s. di Alessandra Tronelli

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Nadir s.a.s. di Alessandra Tronelli

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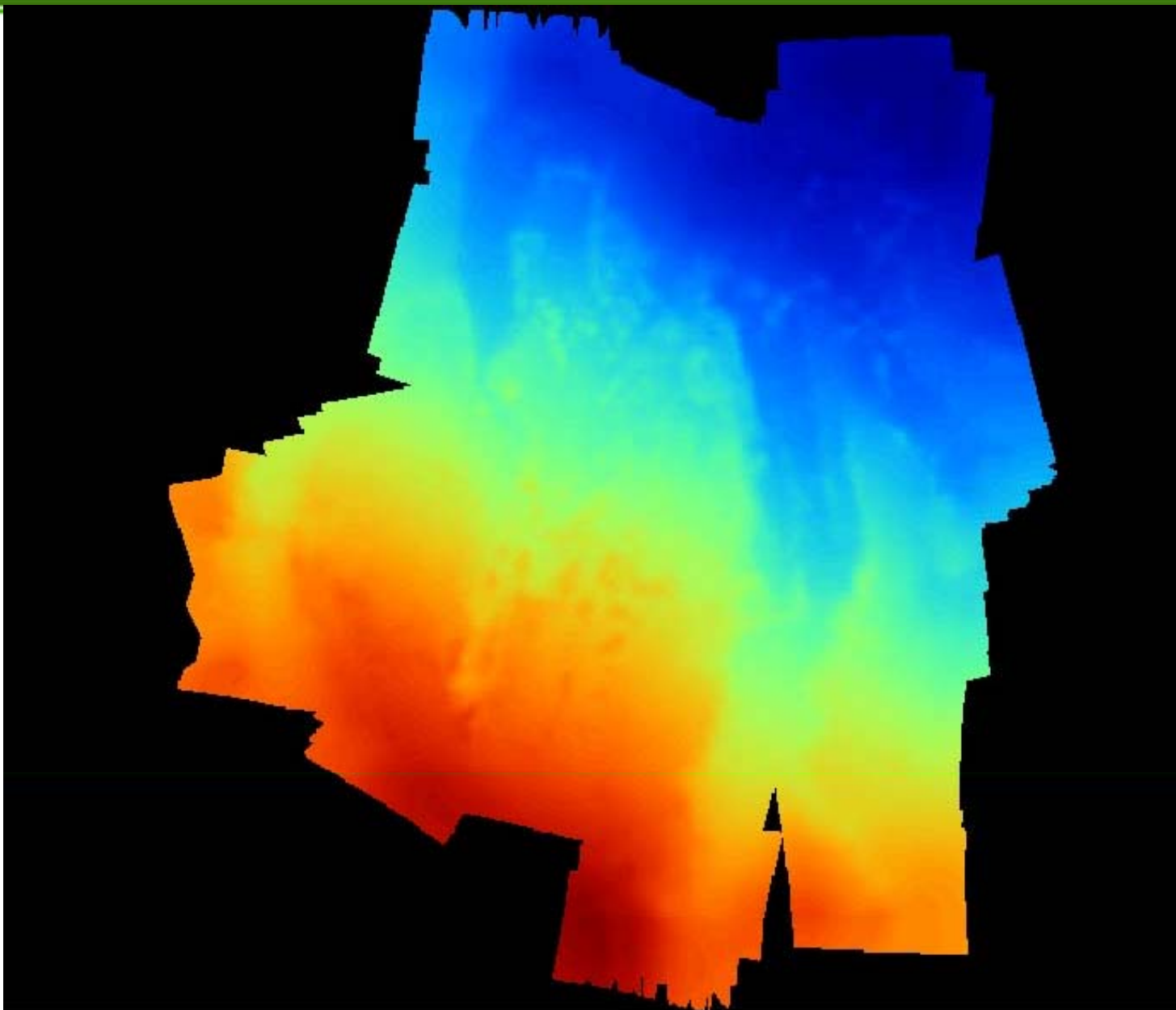
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Francesca Ceccaroni



**Tecnologia “Image Based” a disposizione per:
la conoscenza dello stato dei luoghi e di fatto
per la documentazione, la conservazione,
la prevenzione e la tutela dei
beni culturali, architettonici, archeologici,
ambientali, paesaggistici e territoriali.**

**Strumento di controllo a distanza ed in sicurezza
data la possibilità di effettuare sopralluoghi virtuali**

**Massima affidabilità nel monitoraggio sistematico
di processi evolutivi**

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