



Univerzitet u Beogradu – Građevinski fakultet
www.grf.bg.ac.rs

Studijski program: **GRAĐEVINARSTVO**
Modul: **ZAJEDNIČKE OSNOVE**
Godina/Semestar: **1 godina / 1 semestar**

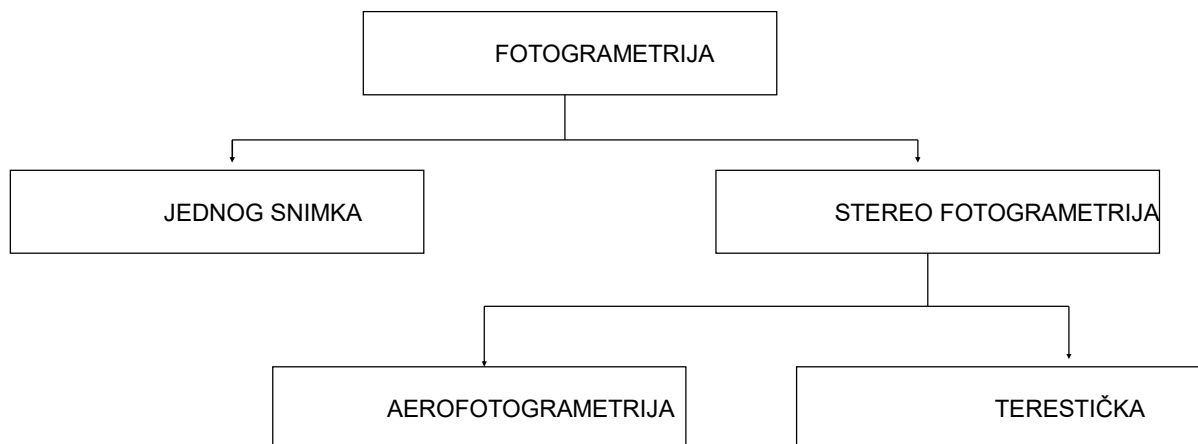
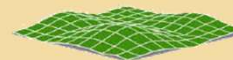
Naziv predmeta (šifra): **GEODEZIJA (B3O1G)**
Nastavnik: **Branislav Bajat**

Naslov predavanja: **Fotogrametrija i lasersko skeniranje**
Datum : 13.01.2022.

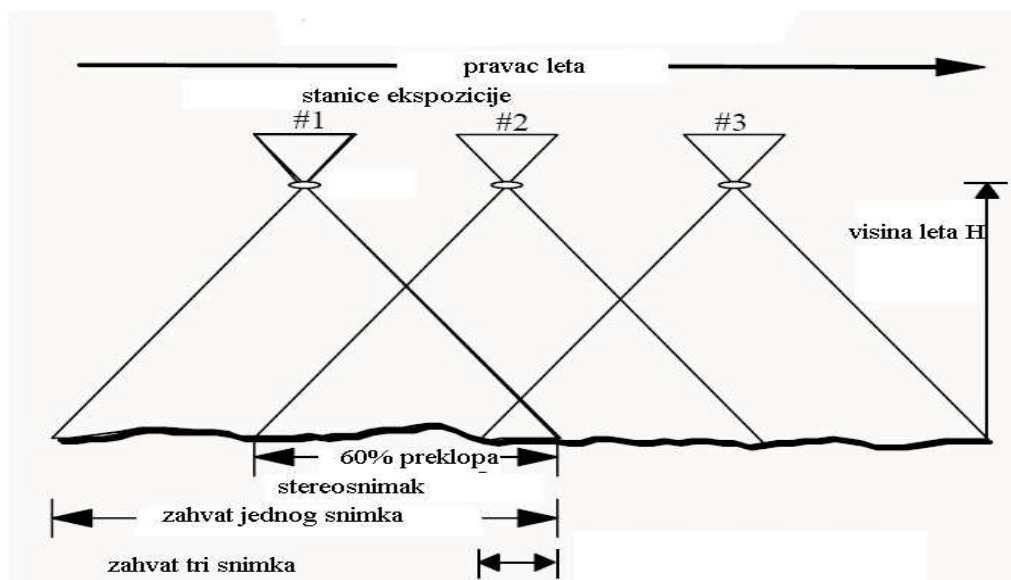
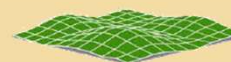
Beograd, 2022.

Sva autorska prava autora prezentacije i/ili video snimaka su zaštićena. Snimak ili prezentacija se mogu koristiti samo za nastavu na daljinu studenta Građevinskog fakulteta Univerziteta u Beogradu u školskoj 2022/2023 i ne mogu se koristiti za druge svrhe bez pismene saglasnosti autora materijala.

Podela

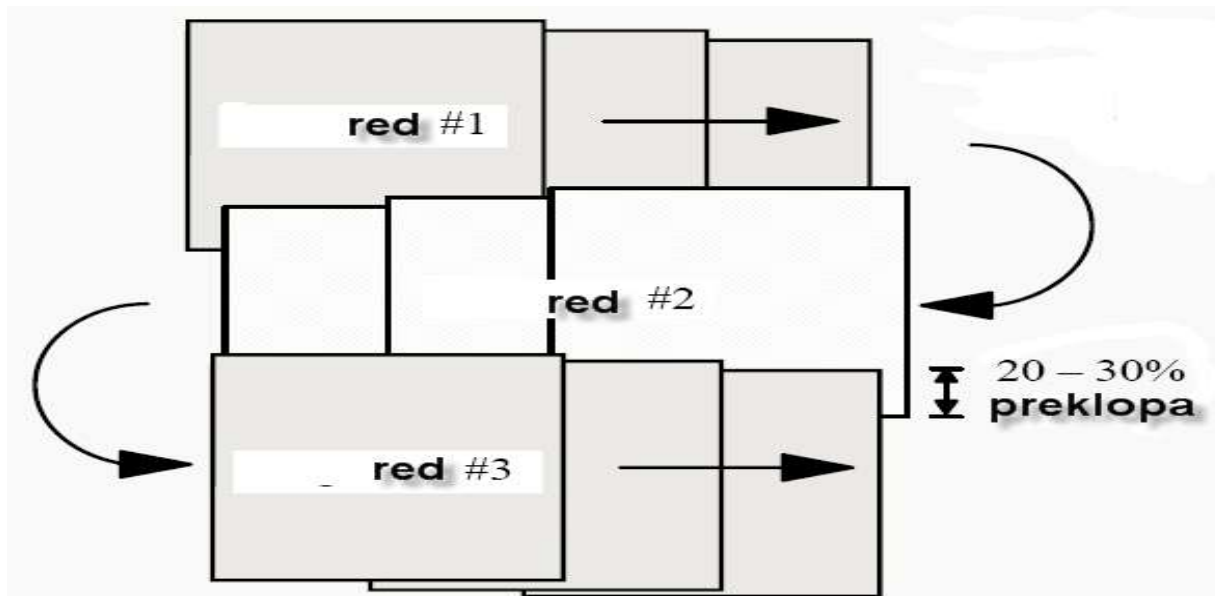
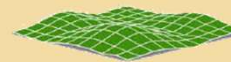


Aerosnimanje



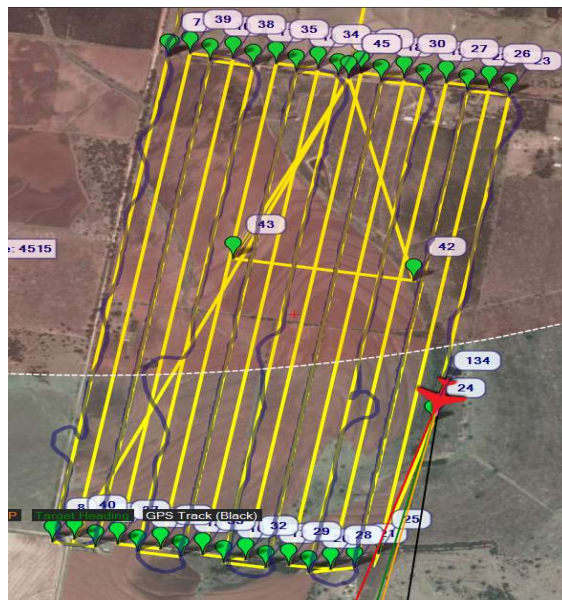
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Aerosnimanje



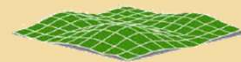
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Plan leta



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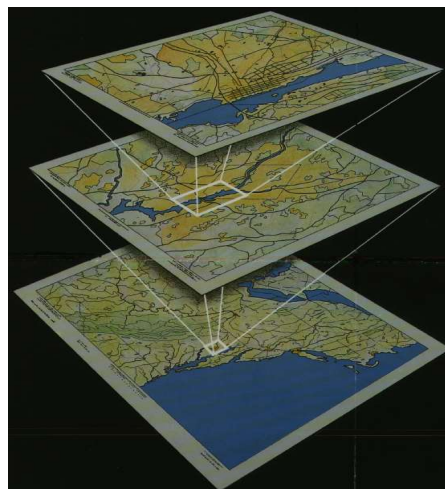
Razmera karte



Krupna



Sitna



1:25 000

1:500 000

1:3 000 000

6

Markiranje tačaka



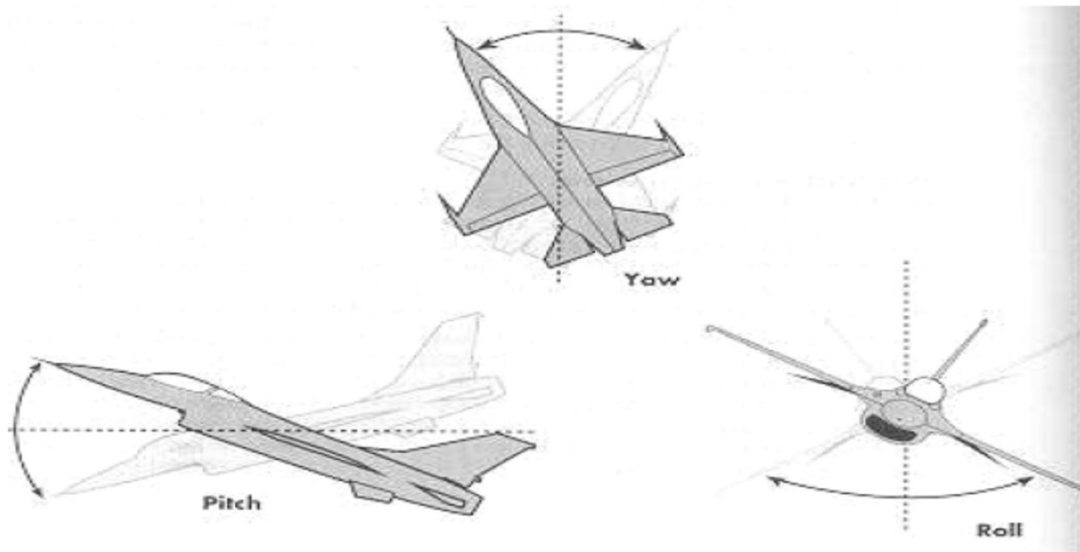
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Kamera

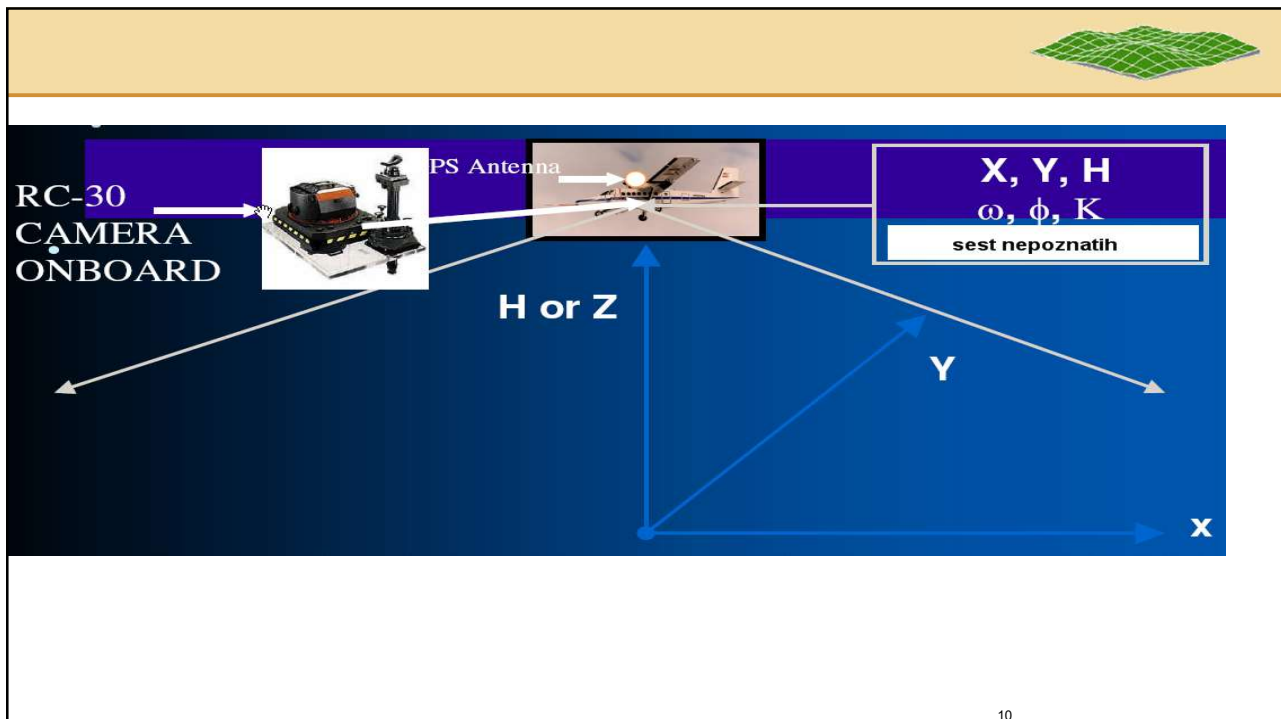


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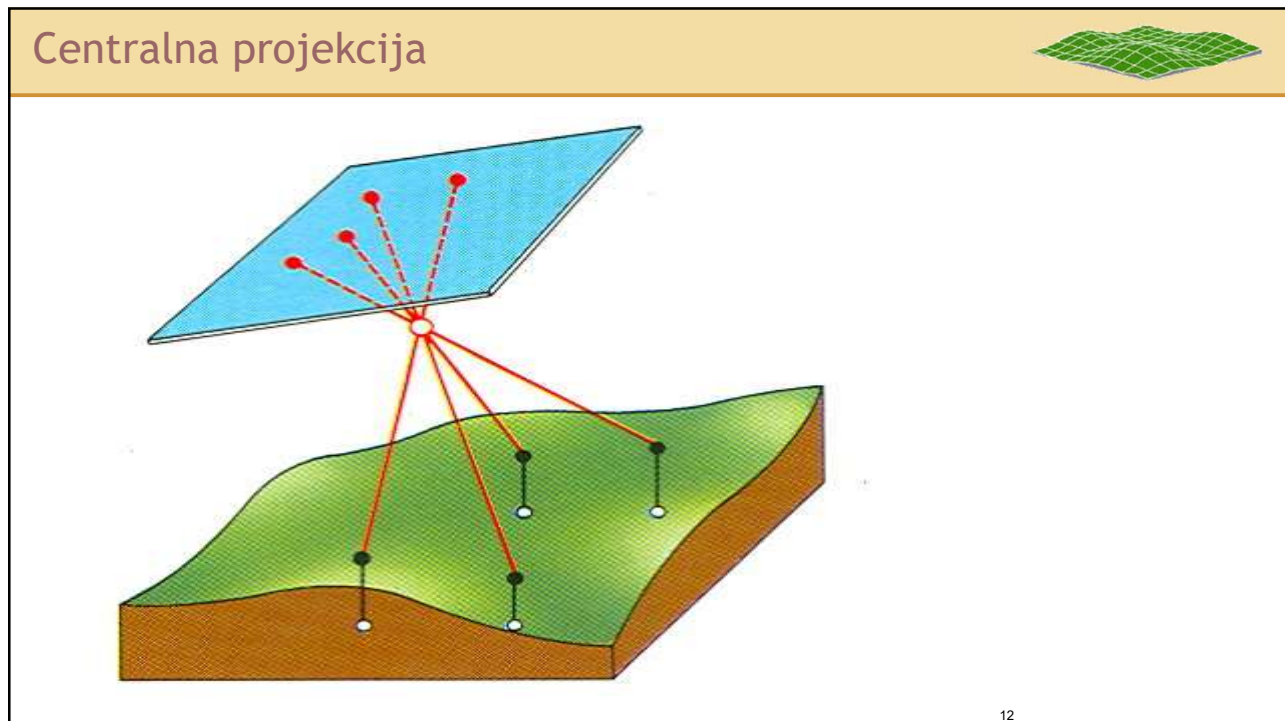
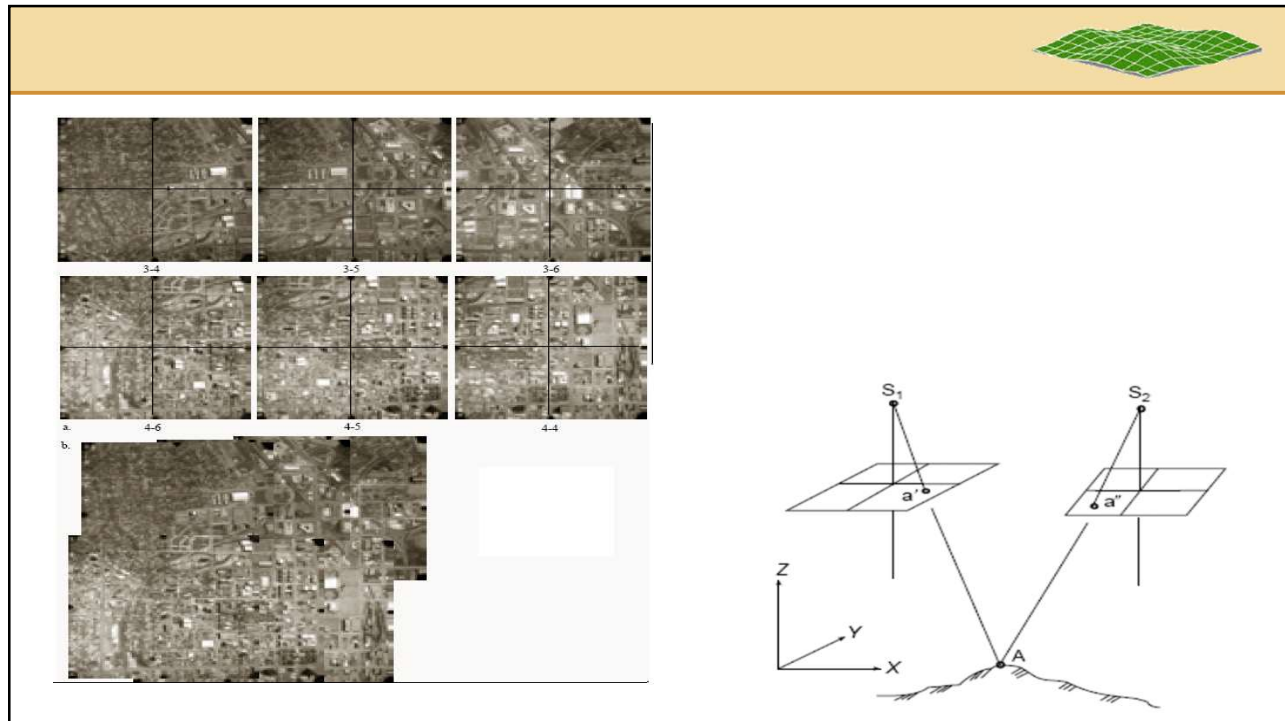
Let aviona



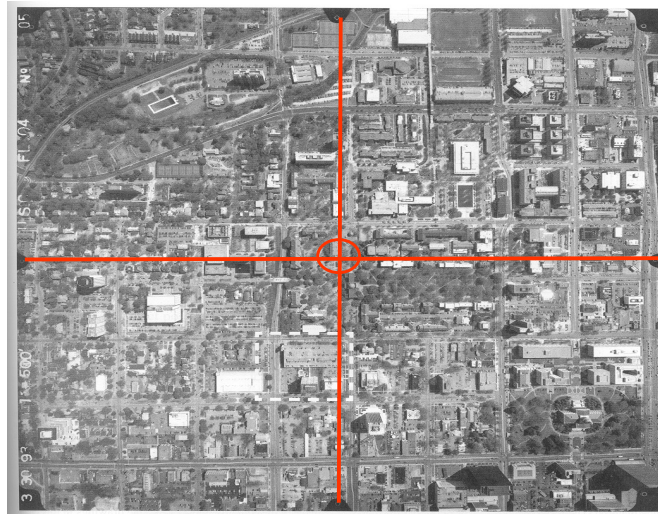
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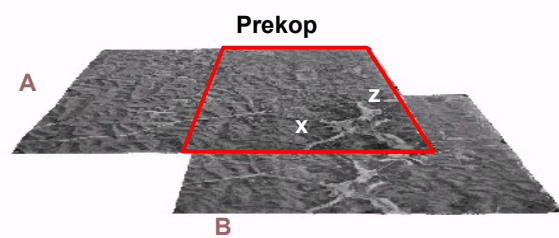
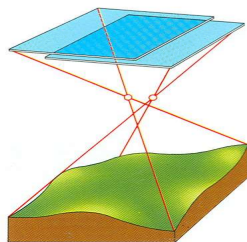
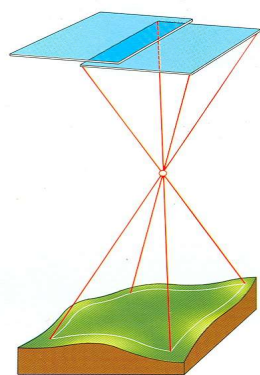


Snimak

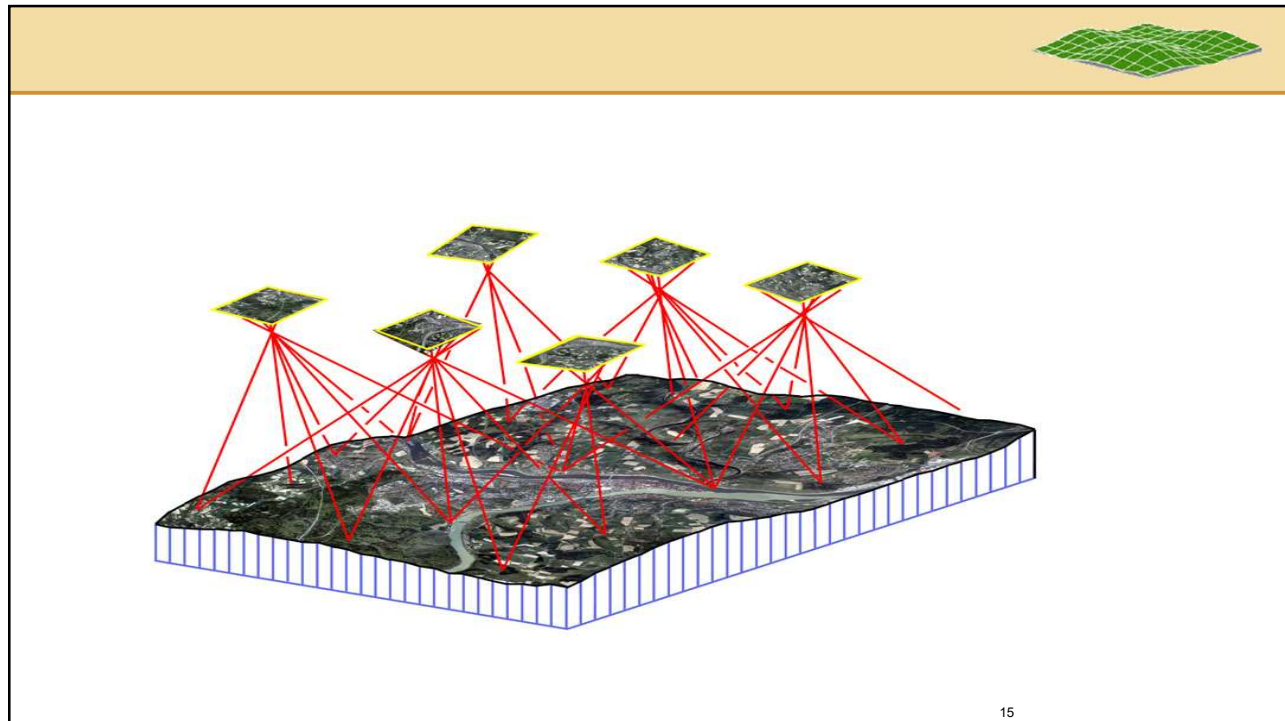


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Model

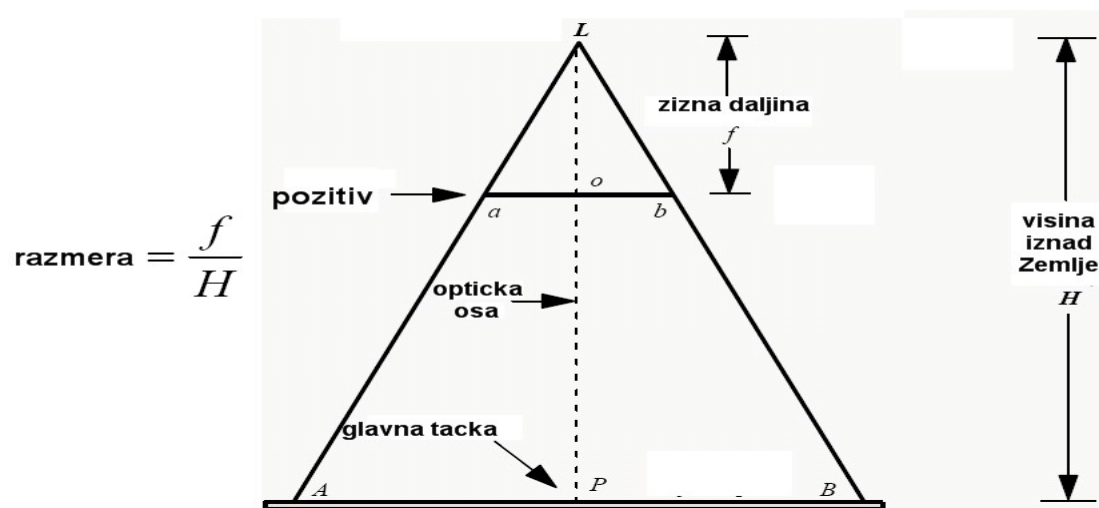


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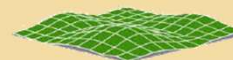
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Ravan teren



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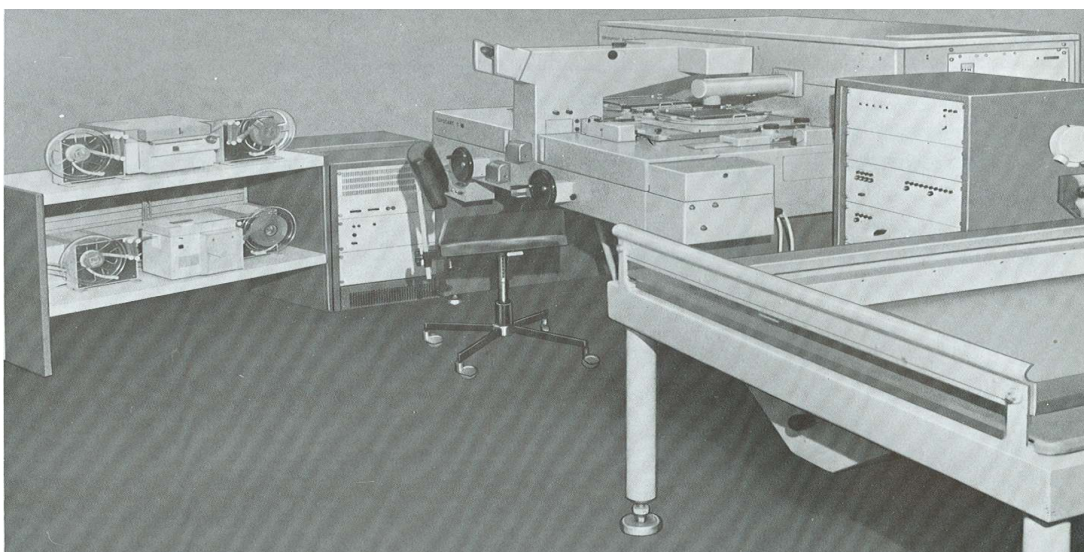
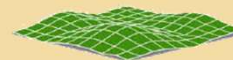
Podela fotogrametrije prema tehnologiji



- Analogni,
- Analitički,
- Digitalni.

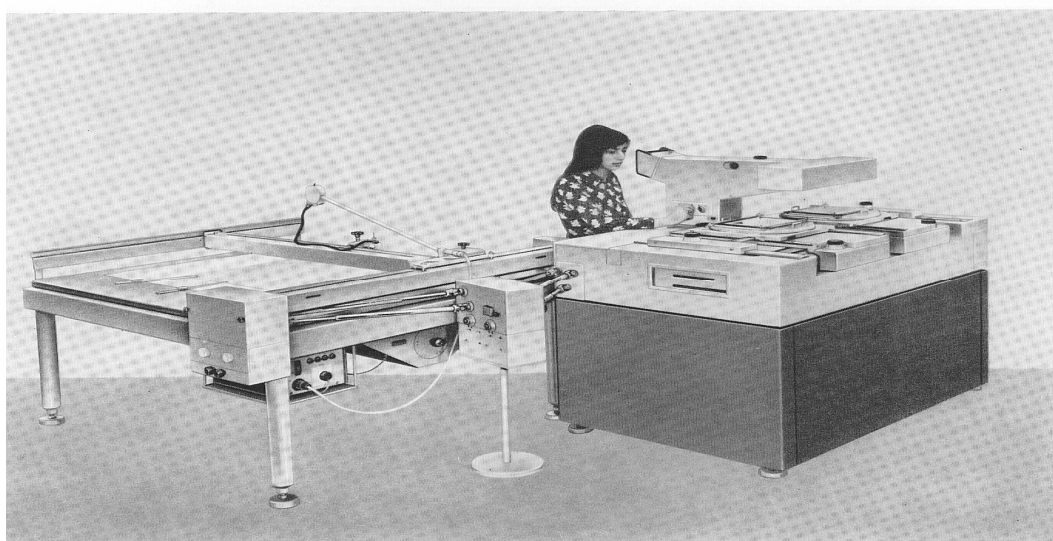
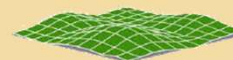
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Stereorestitucioni instrument



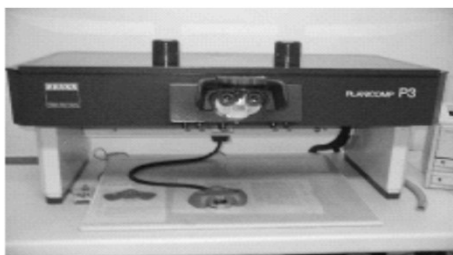
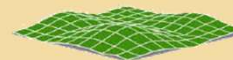
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Analogni



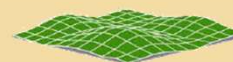
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Instrumenti za restituciju



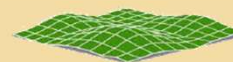
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Digitalna



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Ortofoto produkcija



Deo ortofotoplana



Detalj

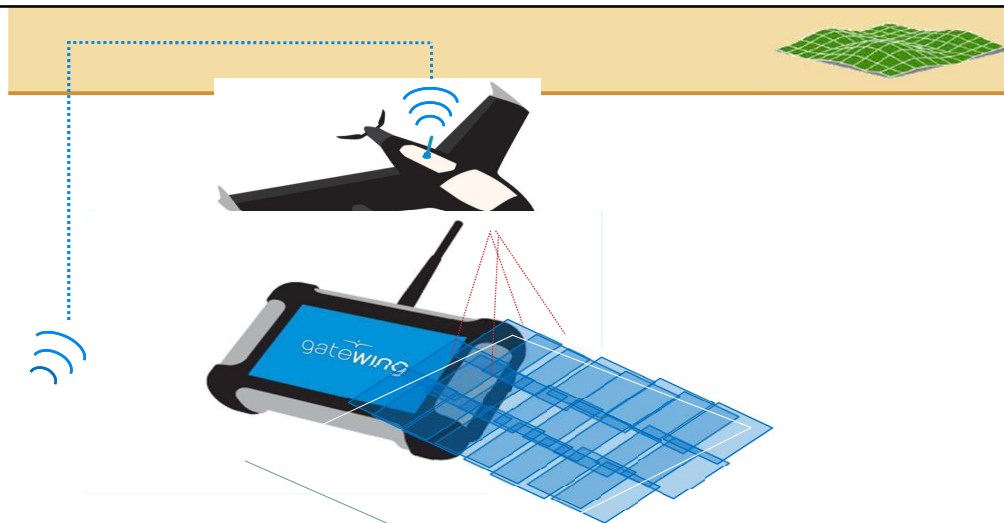


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Bespilotne aerofotogrametrijske stanice

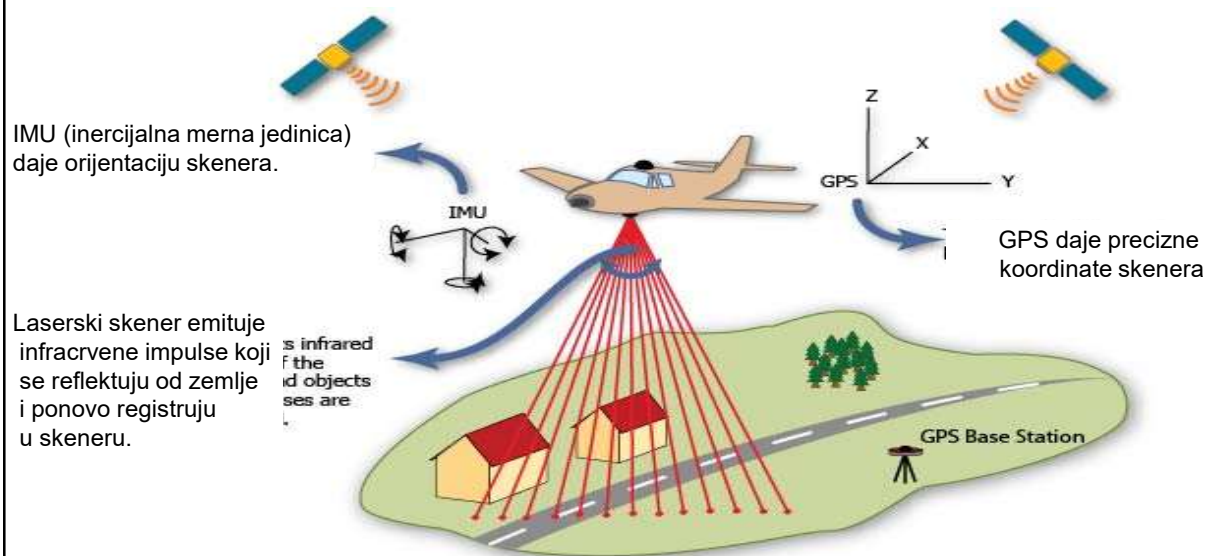


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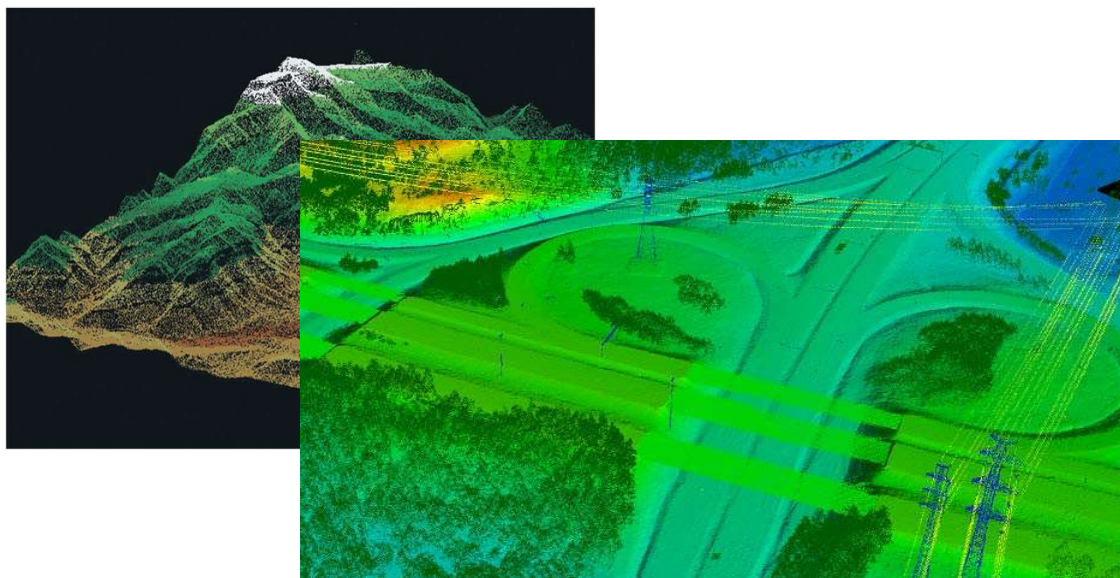
PRE-PROGRAMMED AUTOMATED FLIGHT PLAN SCAN

Light Detection And Ranging (LIDAR) ili Airborne Laser Scanning (ALS)



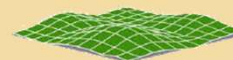
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Oblak tačaka



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LiDAR i digitalna fotogrametrija



- S obzirom na različite platforme na kojima se LiDAR i fotogrametrijski senzori kače ova vrsta tehnologija se deli na sledeće grupe: a) *Airborne Laser Scanning* (ALS), b) *Terrestrial Laser Scanning* (TLS) and c) *Mobile Laser Scanning* (MLS).



a)

(© Bwag/Commons)

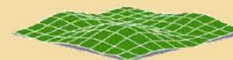


b)



c)

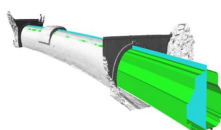
LiDAR i digitalna fotogrametrija



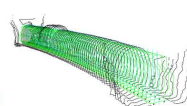
- Oblaci tačaka na ulazu u železnički tunel (pruga Beograd-Bar).



(a)



(b)



(c)

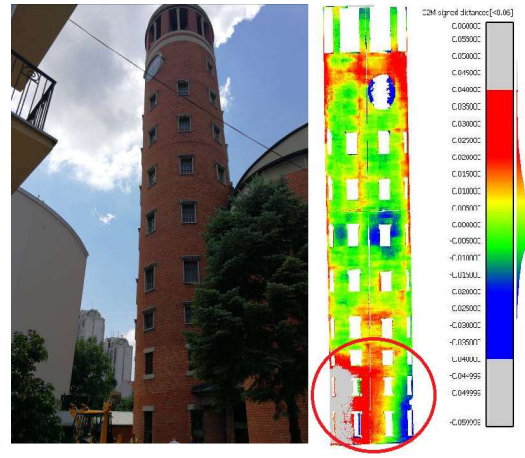
(Pejić (2013) in Tunnelling and Underground Space Technology)

Premer visoke rezolucije u praćenju stanja objekata



a) Toranj crkve Sv. Antona Padovanskog u Beogradu

b) Devijacije tornja u odnosu na projektovani cilindar dobijene na bazi TLS monitoringa.
(Report Pejić et al. 2019)



a)

b)