

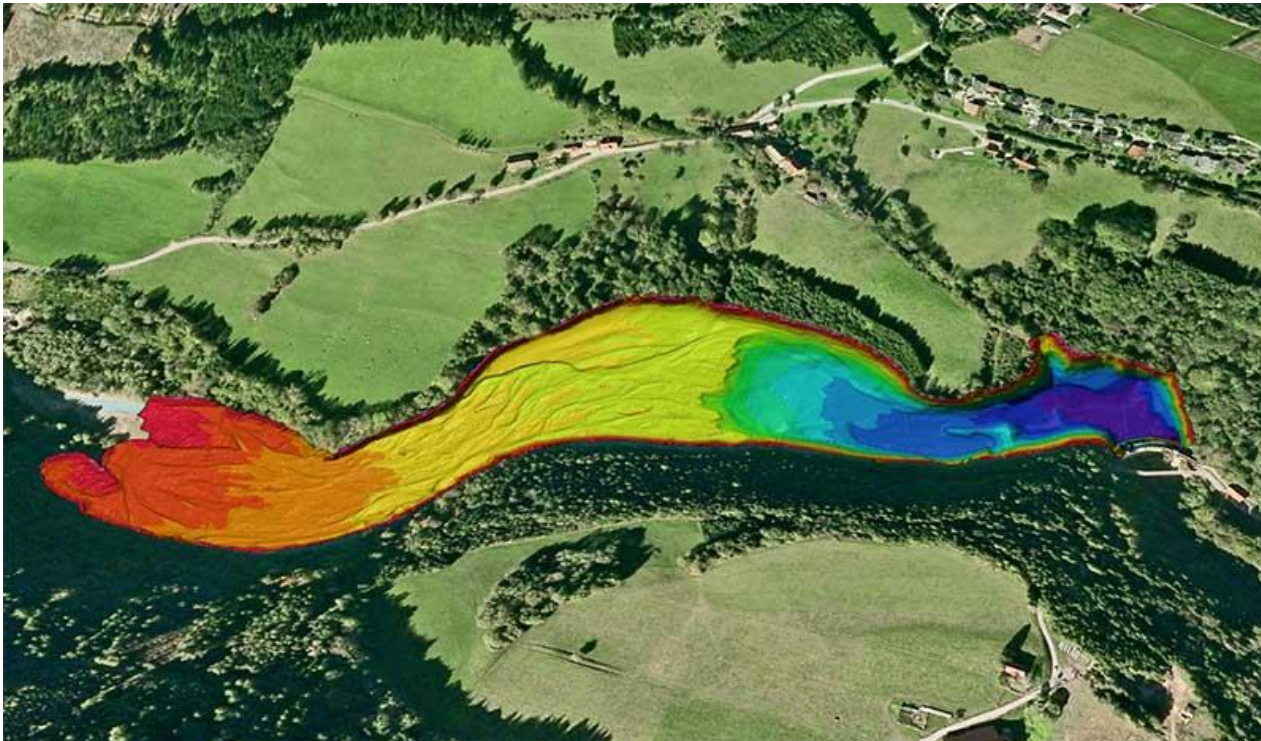
Prikupljanje batimetrijskih podataka

Pomoću multi bean uređaja

Šta je batimetrija?

- ▶ **Batimetrija** – predstavlja definisanje geometrije rečnog korita

Karta sa prostornim prikazom rečnog korita predstavljka osnovnu topografsku podlogu za sve hidrauličke i psamološke proračune.



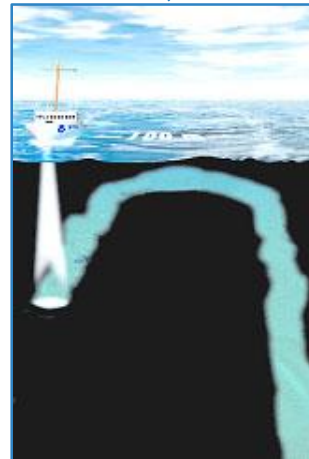
Kako se dobijaju podaci?

MERENJE DUBINE

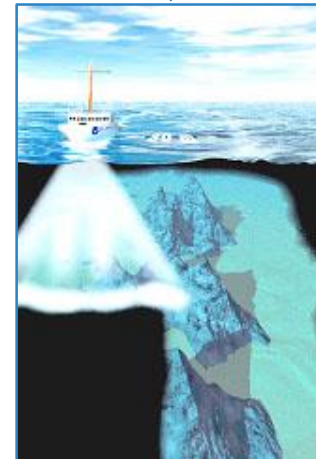
Ručno



Pomoću dubinomera



Single beam



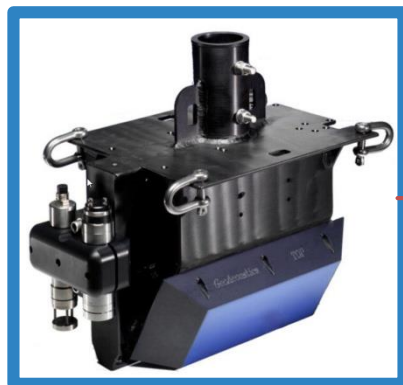
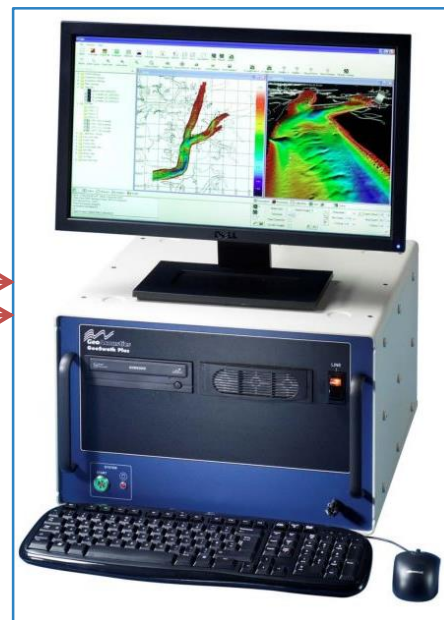
Multi beam

Konfiguracija sistema

RTK GPS Pozicija, kurs, sinhronizacija



Računar sa programom za kontrolu i akviziciju



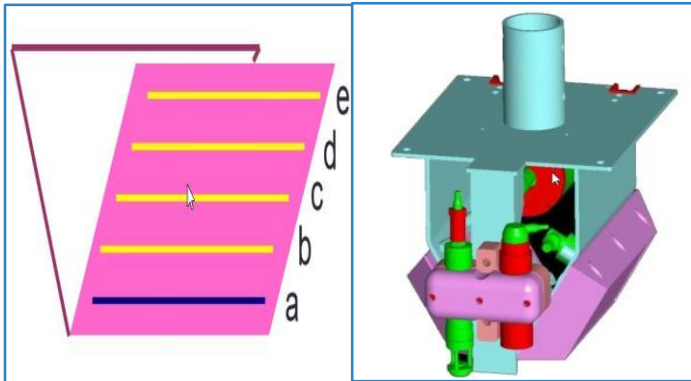
Vodostaj



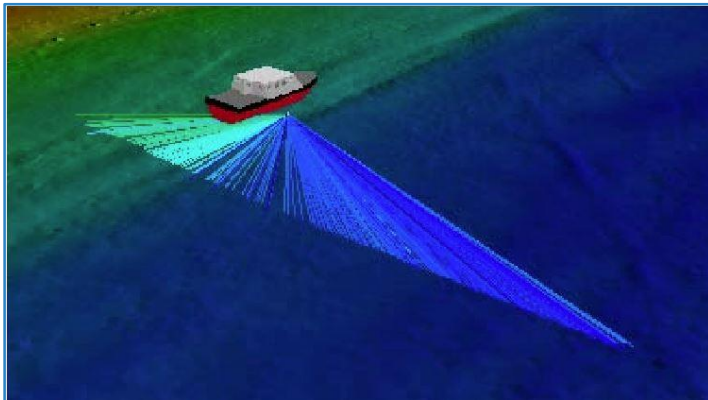
Brzina zvuka

Sonde montirane na kućište oblika "V" sa dodatnim sezorima za merenje pokreta broda, brzine zvuka i altimeter

Princip rada uređaja

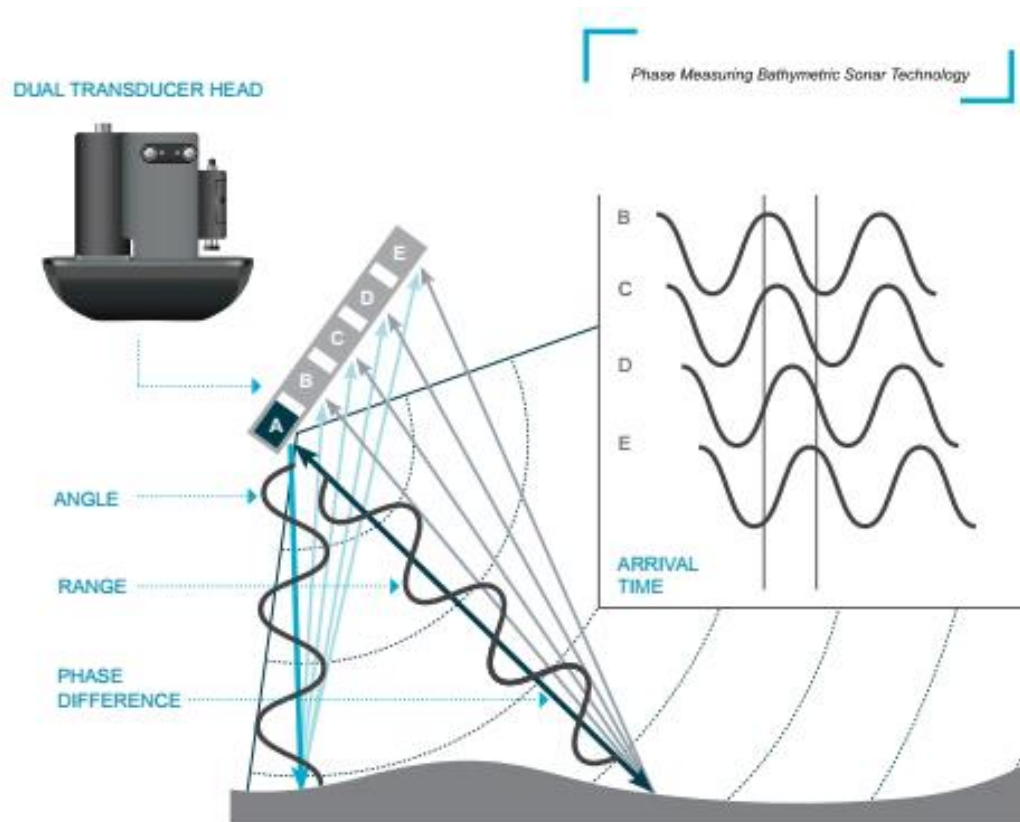


Dve sonde montirane na V kućište pod uglom od 60°
Svaka sonda ima 5 keramičkih elemenata u obliku šipki
4 za prijem signala odbijenog od dna
1 za emitovanje snopa



Sonde emituju lepezast snop

Princip rada uređaja



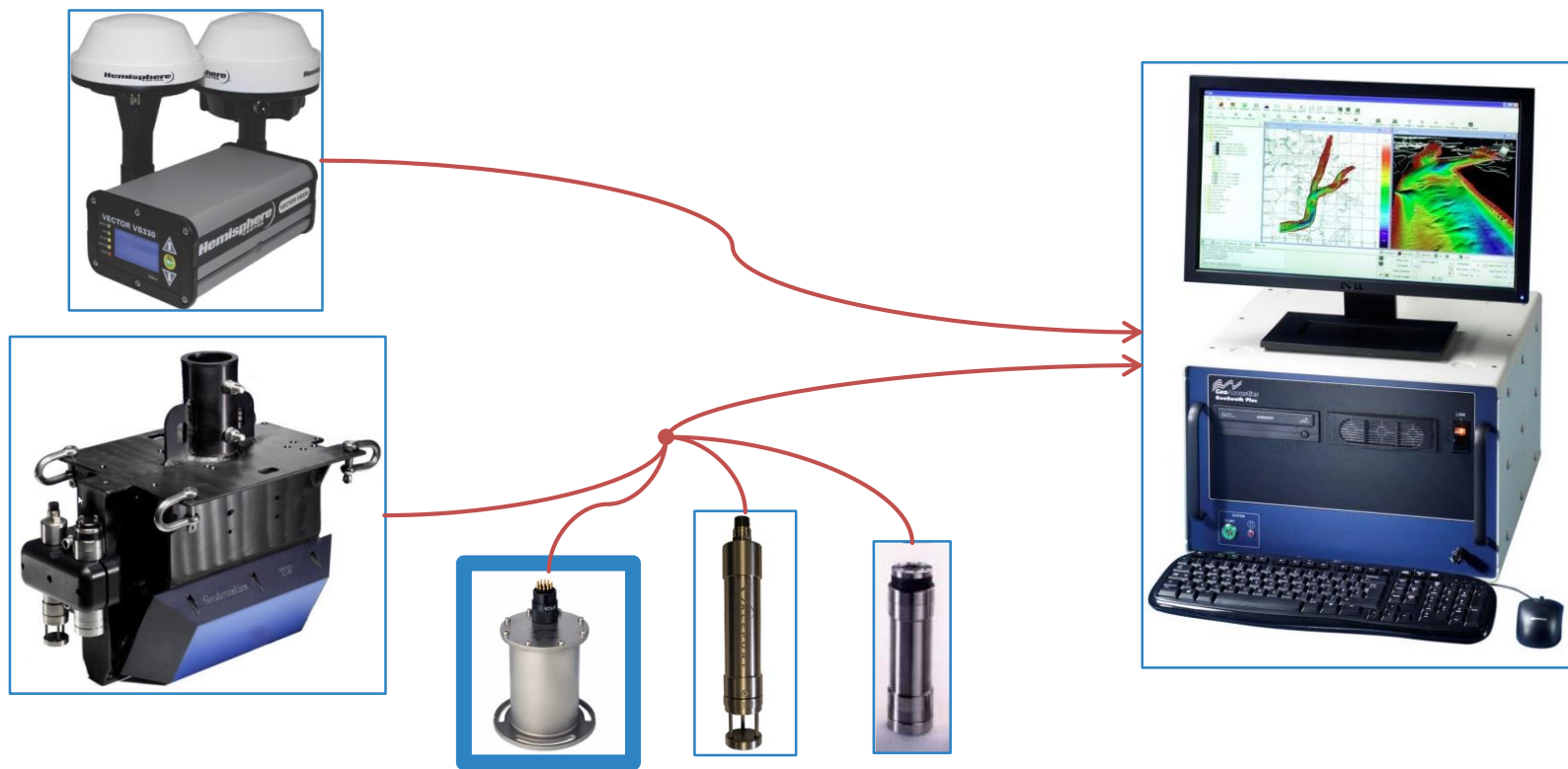
Snop se odbija od dna

Svaka prijemna šipka prima odbijeni signal

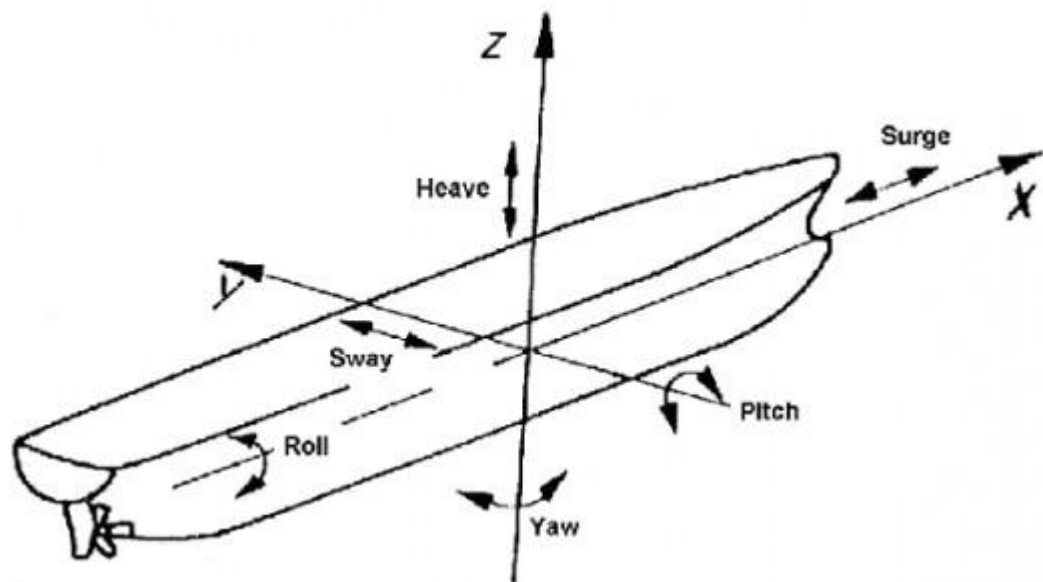
Na osnovu fazne razlike odbijenog signala sistem računa **ugao** ($0,04^\circ$)

Merenjem vremena od emitovanja do prijema signala sistem računa **udaljenost**

Senzor pomeranja (motion sensor)



Senzor pomeranja (motion sensor)

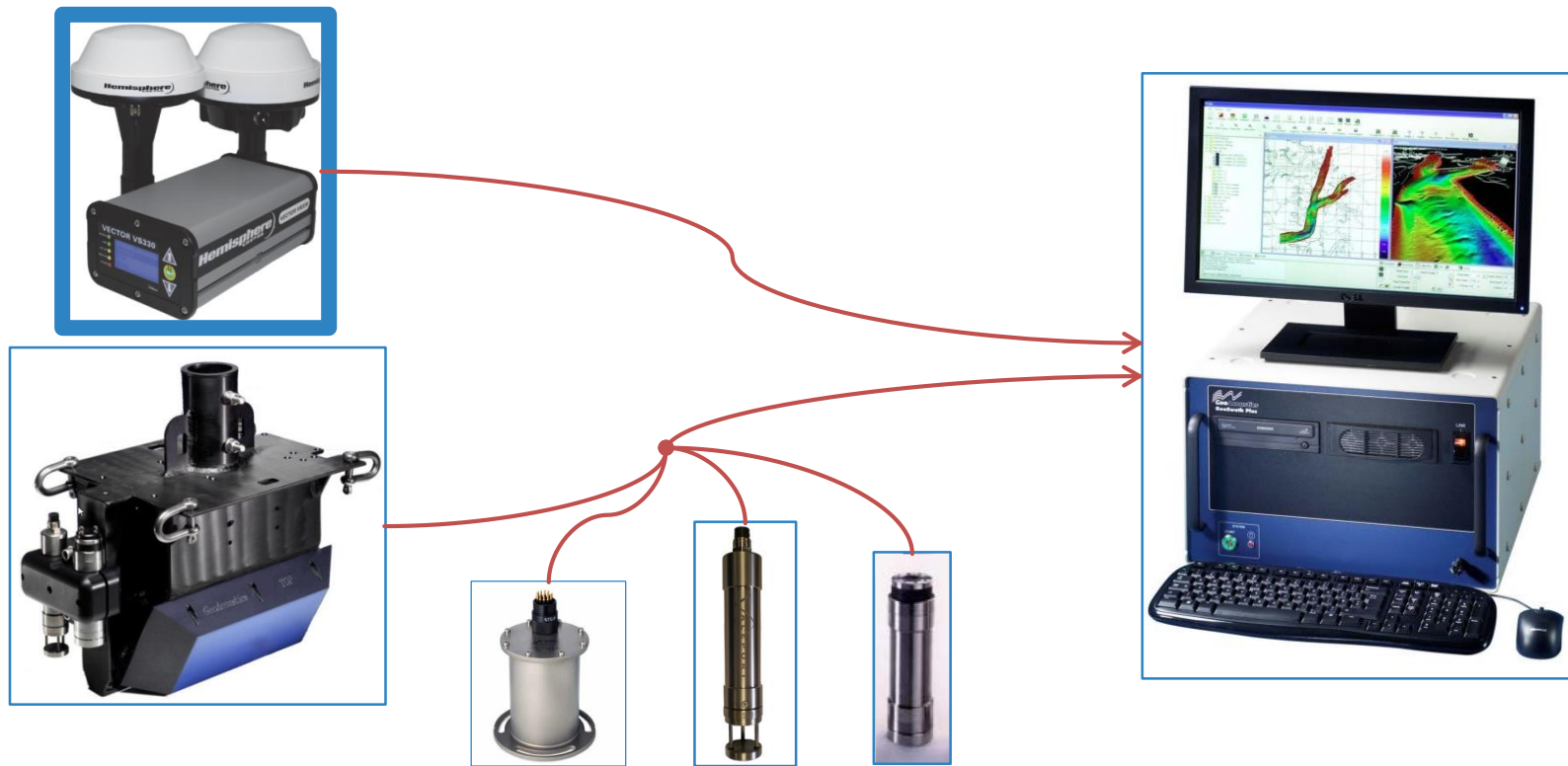


Meri :

- Izdignuće (heave)
- I obrtanja oko osa (roll i pitch)

Važno da bi se znao položaj uređaja

Gps uređaji



Gps uređaji



Određuju:

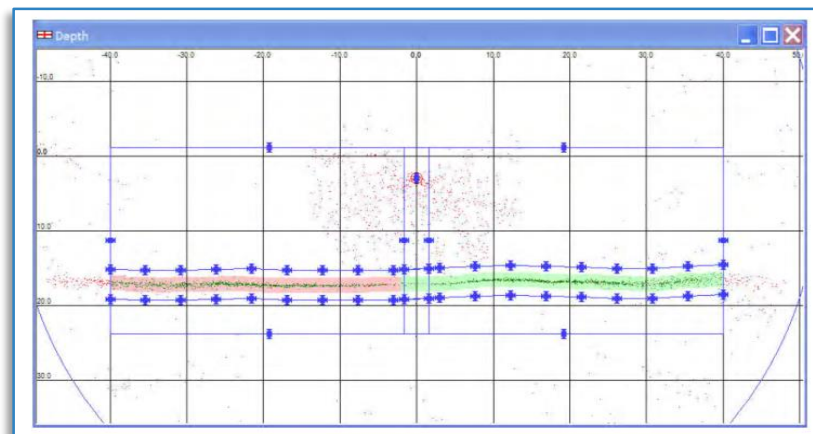
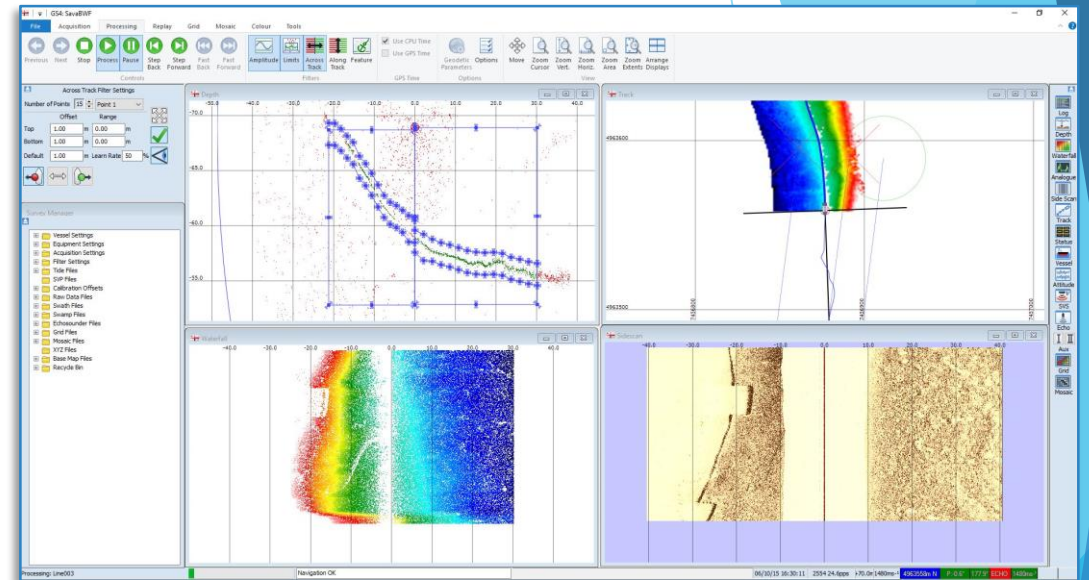
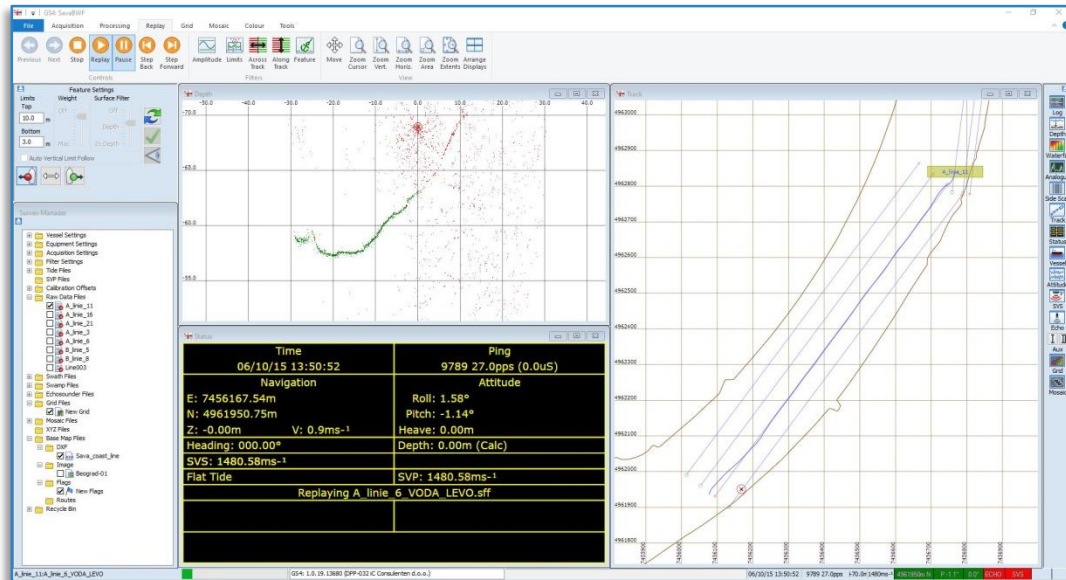
- Poziciju
- Pravac (dve antene primarna i sekundarna)
- Nivo vode

Korekcija nivoa vode:

- Preko RTK stanice na obali
- Povezivanje na sistem stacionarnih GPS tačaka
- Korišćenje podataka o vodostaju



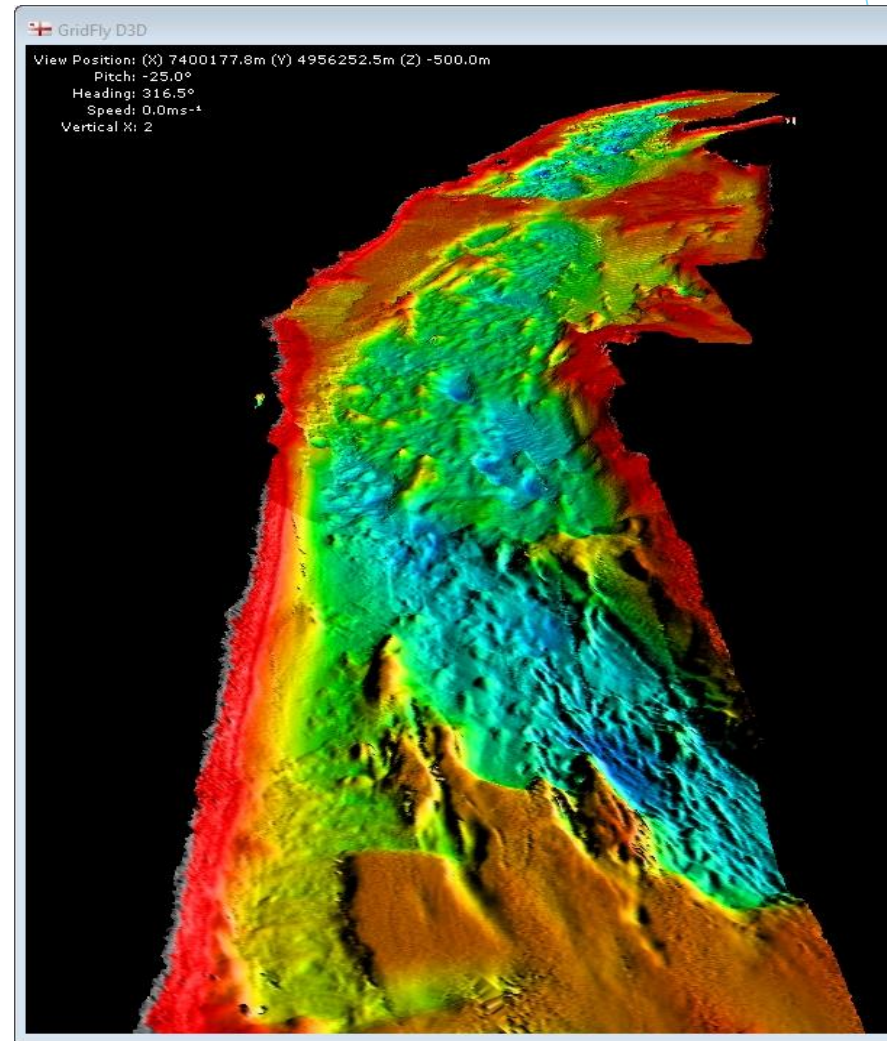
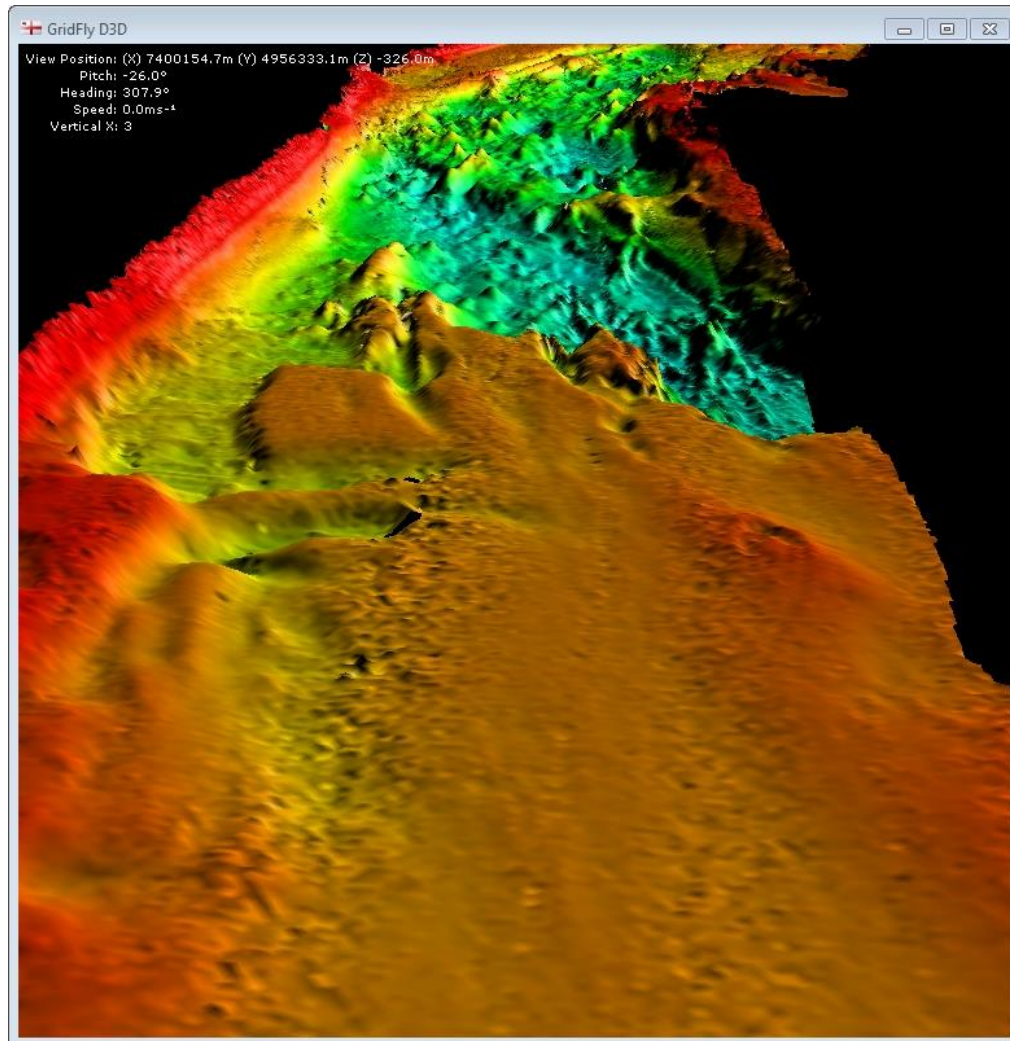
Terensko snimanje



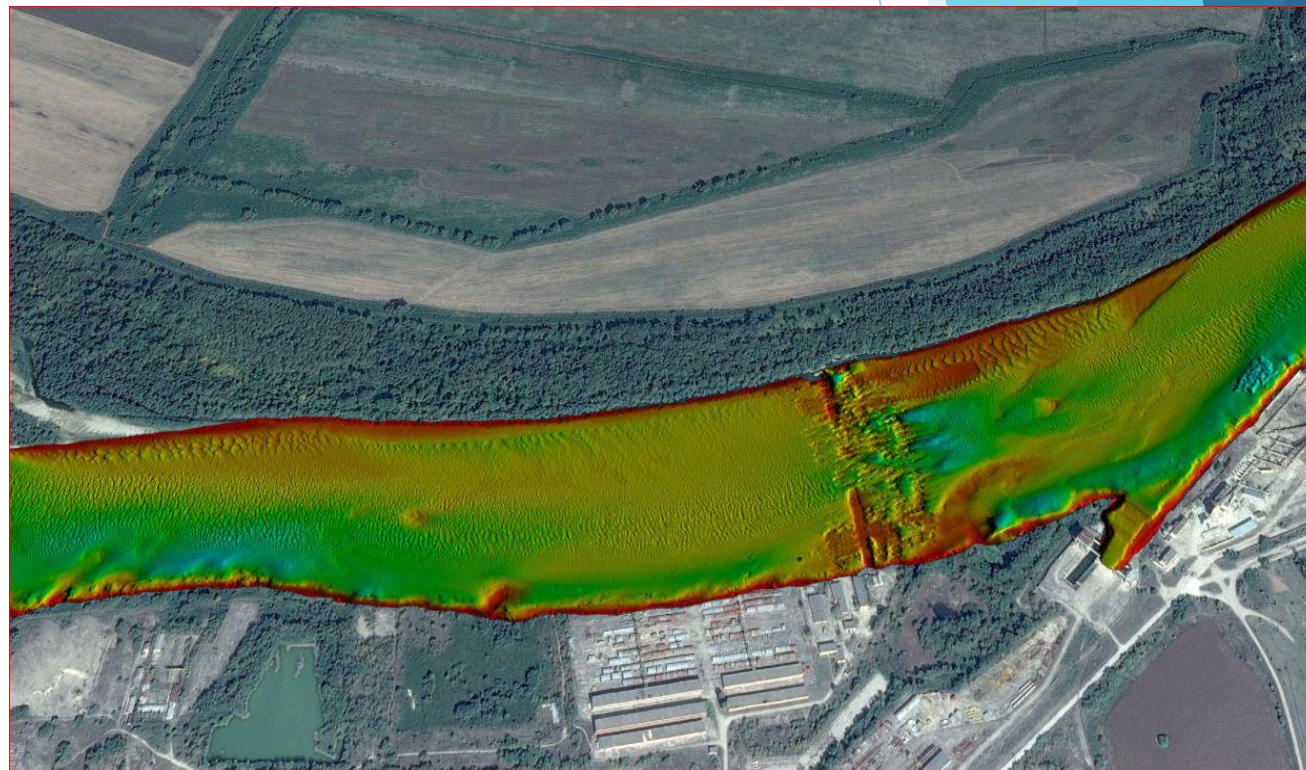
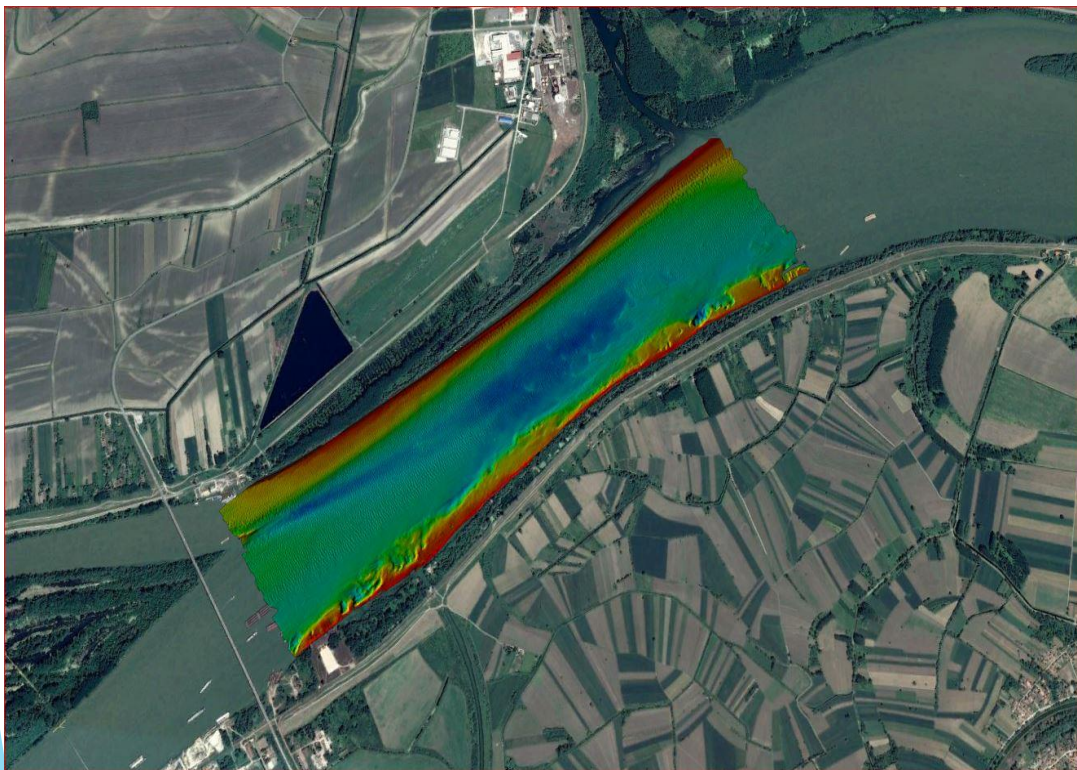
Terensko snimanje



Dobijeni podaci



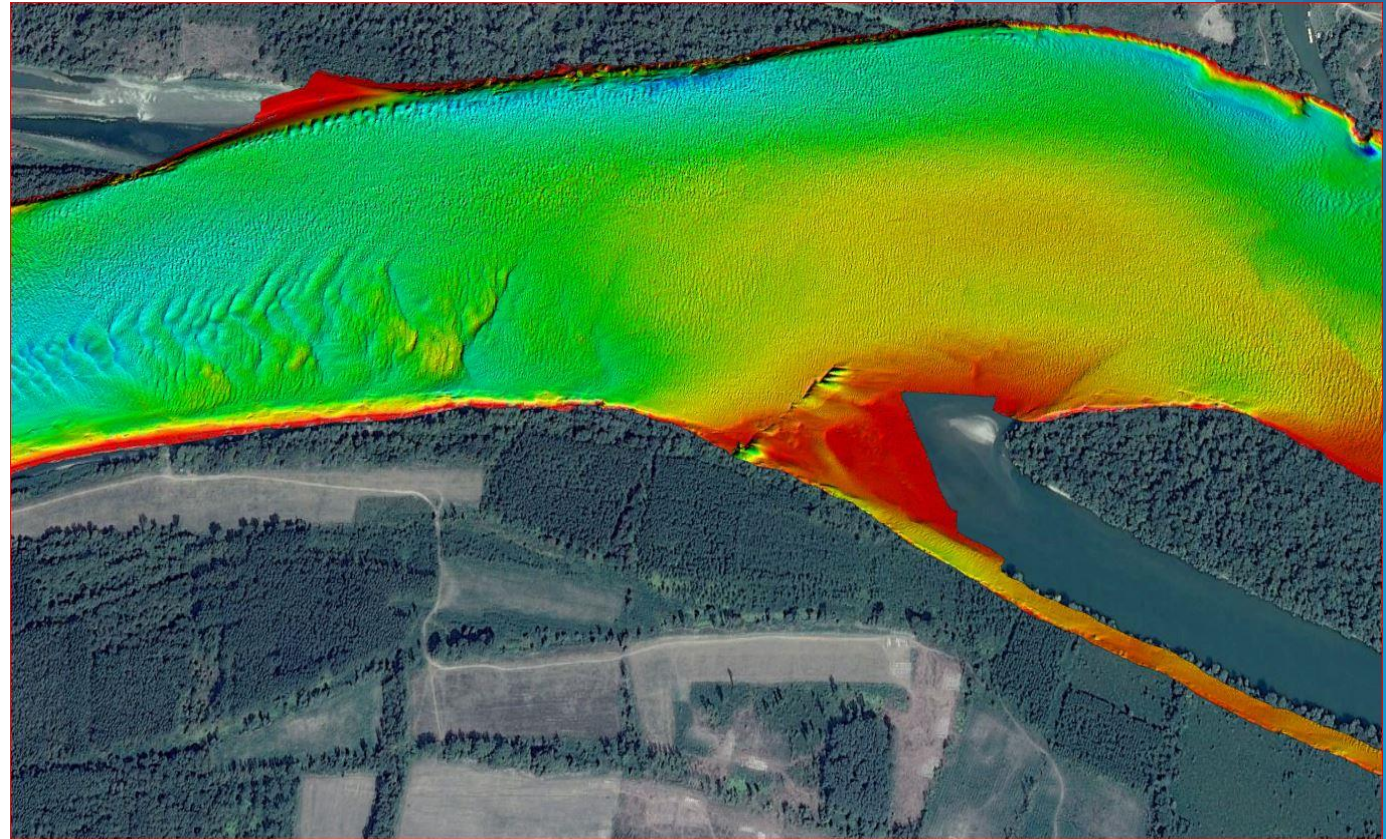
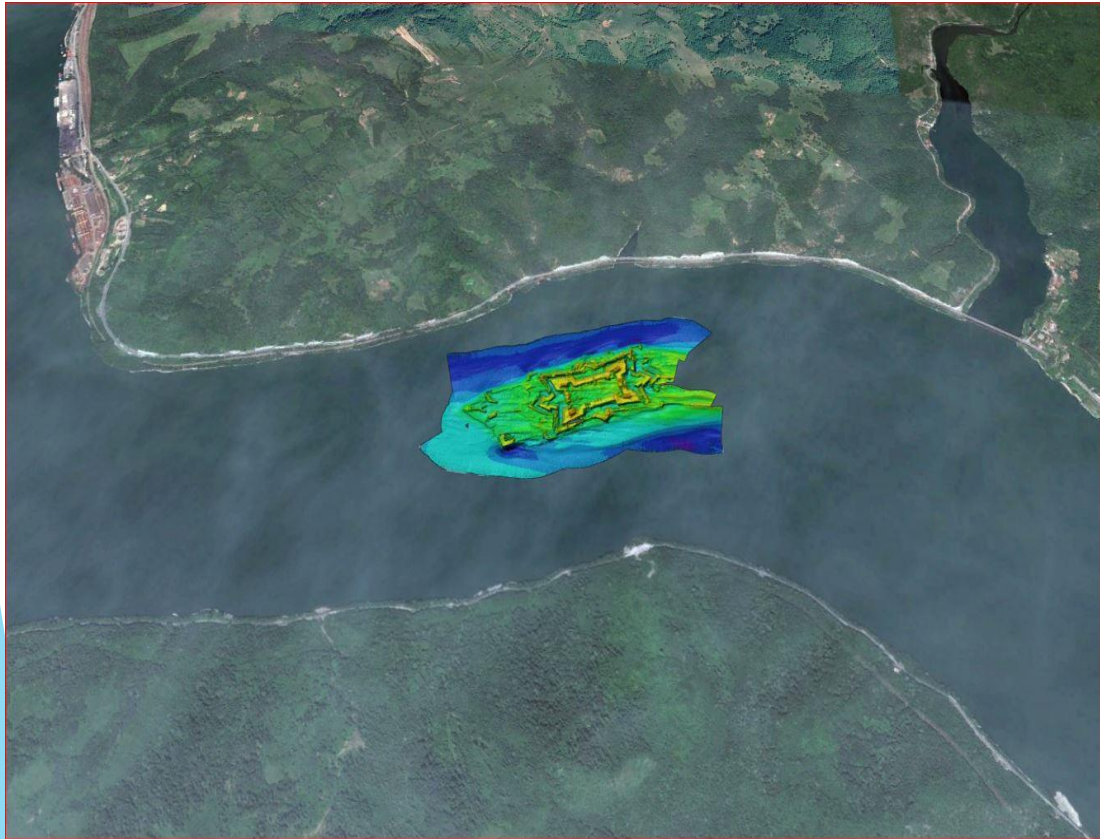
Dobijeni podaci



Dobijeni podaci



Dobijeni podaci



Prkipljanje batimetrijskih podataka

Pomoću multi beam uređaja

