A dark, atmospheric background image showing a snowy mountain range on the left, a large ship on the water on the right, and a small boat in the foreground. A network of glowing white lines connects various points across the scene, suggesting a data network or communication links. A helicopter is visible in the upper right, and a small aircraft is in the upper center.

Framtidens taktiske trådløse datalinker

Hvor er vi på vei?

Teknologidager med Sjøforsvaret

Haakonsvern, Bergen, 10.01.2020

Hanne Sjøvold Hansen, Radionor Communications AS

20 ÅR MED TEKNOLOGISK INNOVASJON



Photo: UMS Skeldar



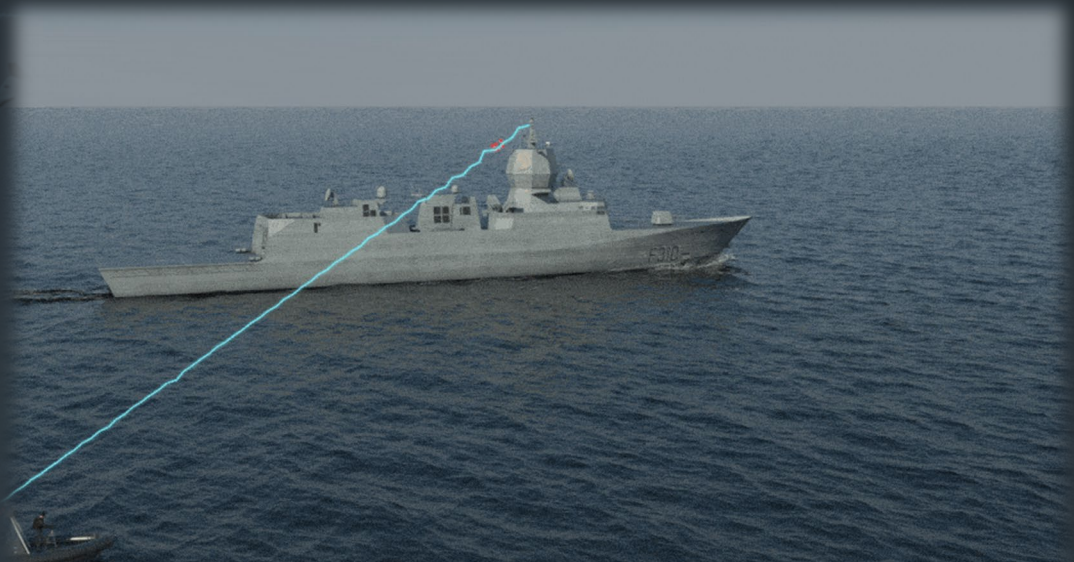
Novel technology

Tactical phased array communication. Narrow beams w/o moving parts



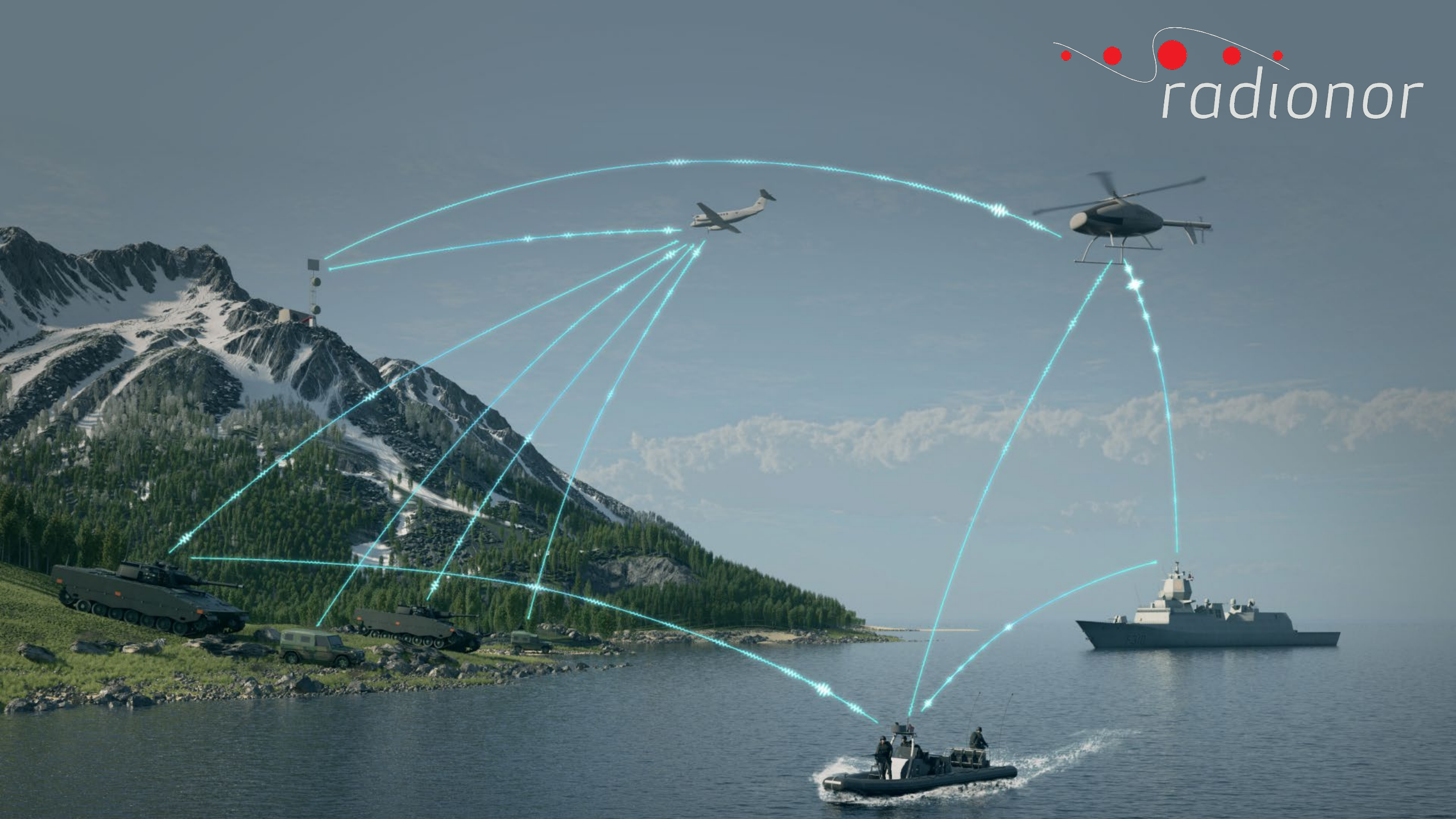
Conventional system:

- ❖ Energy radiated in all directions
- ❖ >99% wasted RF energy
- ❖ Limited range
- ❖ Low data rates
- ❖ Unwanted spectrum «pollution»
- ❖ Easy to monitor by enemy
- ❖ Easy to jam & block in VHF/UHF
- ❖ Frequency hopping required



Electronic beamsteering:

- ❖ Energy radiated in the right direction
- ❖ Little wasted RF energy
- ❖ Long range
- ❖ High data rates with video capability
- ❖ Effective spectrum utilization
- ❖ Difficult to monitor by enemy
- ❖ Narrow beam prevents jamming
- ❖ No frequency hopping required



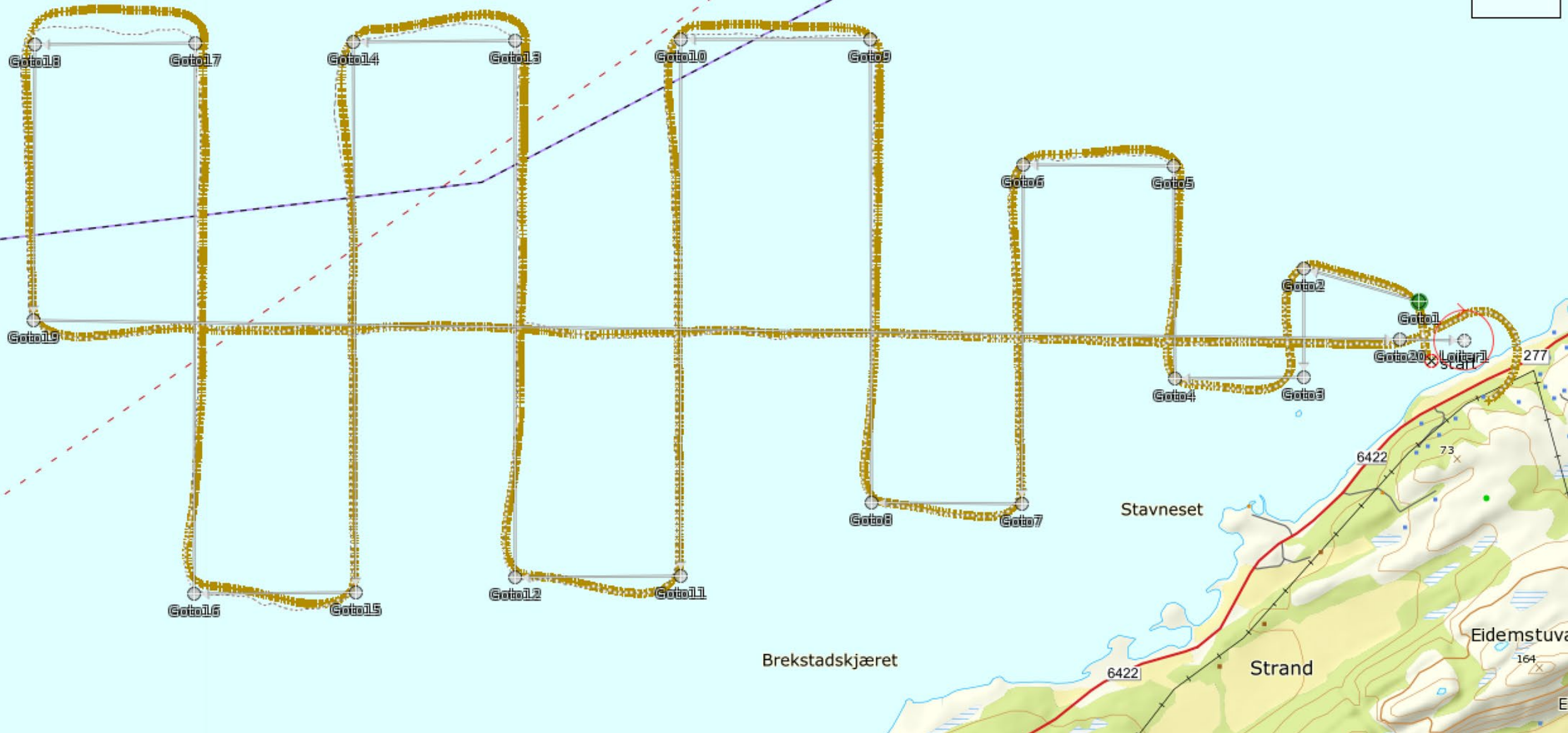
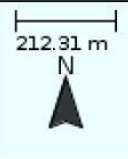


Photo credit: Kristoffer Gryte, NTNU



Foto: Forsvaret



Foto: Torbjørn Kjosvold

