

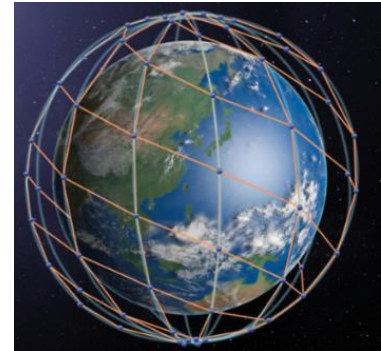
Integrated Satellite-Terrestrial Systems for Critical Users (INTERSTELLAR)

Project idea in 5GTNF seminar,
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Motivation

- In remote areas, there is increasing demand for high quality reliable mobile services.
- One of the main challenges is to find a cost efficient solution for challenging user requirements.
- Using integrated satcom/terrestrial networks is one promising approach:
 - Considered within 3GPP 5G evolution as part of non-terrestrial networks (NTN).
 - Mega constellation satellite communication systems for global broadband under deployment (SpaceX, Telesat, OneWeb).

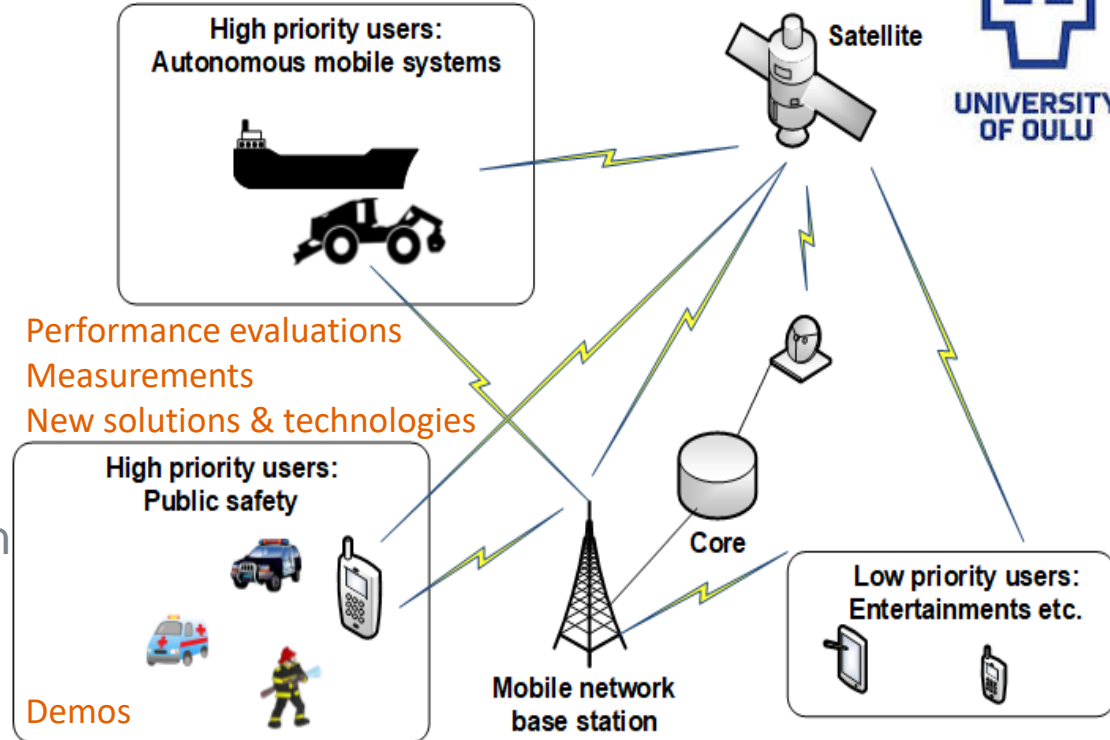


Integrated satellite-terrestrial systems: Project challenges and approach

- How ecosystems in this area will look like in near future?
 - What are new global business opportunities in Finland, Europe?
 - What is achievable performance for e.g. critical users as satcom and terrestrial networks differ significantly?
-  ■ Understanding both the capabilities of emerging systems and ecosystem opportunities is in a key role in this new business area:
- Ecosystem project with selected use cases and joint target systems.
 - Strong need for new simulation / emulation / testing environments.

Ongoing Finnish project preparation: Integrated Satellite-Terrestrial Systems for Critical Users (INTERSTELLAR)

- How to utilize new space networks efficiently and reliably for critical users?
- What are relevant technologies bringing global business opportunities for Finnish companies?
- Companies interested in e.g. technology developments in these areas are welcome to join the consortium.
- Research partners: University of Oulu, VTT.



European collaboration possibilities

- International collaboration is extremely important for satcom communications.
- National Finnish project currently under planning would also benefit from co-operation with e.g. European satellite/terrestrial operators in this field.
- Planning new CELTIC-NEXT proposal is one possibility if interested consortiums from other countries are found.