

GREENET PROJECT

www.fp7-greenet.eu

xavier.ponsmasbernat@cassidian.com



greenet

• **What is GREENET?**

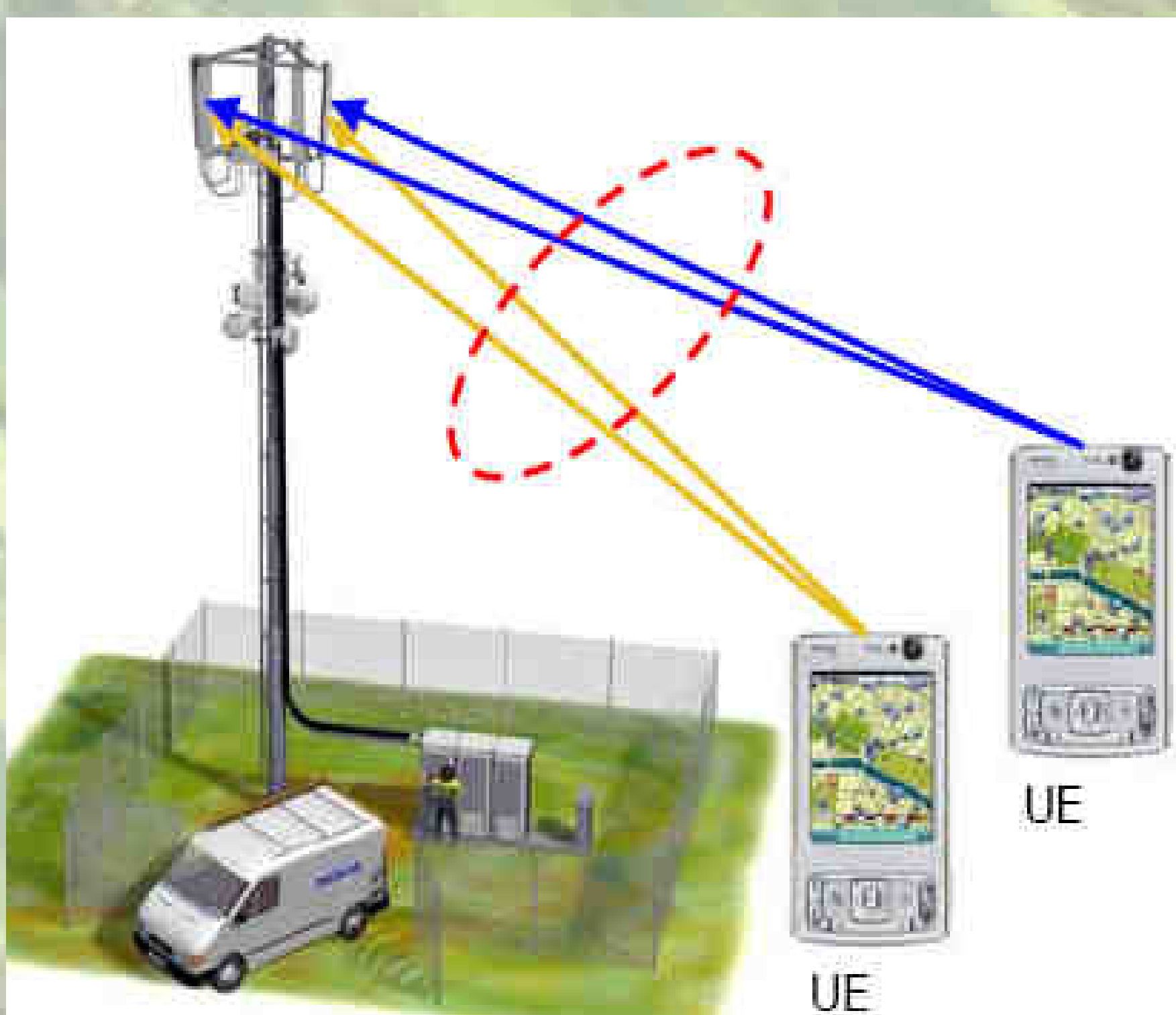
GREENET is an Initial Training Network (ITN) Marie Curie project that is focused on the analysis, design, and optimization of **energy efficient wireless communication systems and networks**.

The GREENET project tries to find more energy efficient, and less power consuming solutions for the existing and upcoming wireless communications networks and systems.

• **Why does GREENET exists?**

The Information and Communication Technology (ICT) industry currently accounts for **2% of worldwide carbon emissions**, and that figure is expected to at least double over the next decade. In wireless communication technologies, 4G envisages higher data rates and multi standard radio interfaces to provide all the users with a continuous seamless connection. All these new demands are translated into **more electricity consumption**.

It is forecasted that a dramatic increase in the energy consumption of 4G devices will make active cooling a necessity. The power requirements, not only come from the handset part, but also from the antenna sites. At present, radio networks sites account for some 80% of the total electricity used by a cellular phone system operator.



• **What GREENET is looking for?**

The main objectives with the large number of upcoming power demanding devices are:

- **Reduce the energy consumption**
- **Reduce the amount of electromagnetic radiations**

One of the biggest challenges for the future wireless systems is the need to limit the energy consumption of battery powered devices and antenna sites, with the aim of avoiding active cooling and prolonging their operational time for mobile devices.