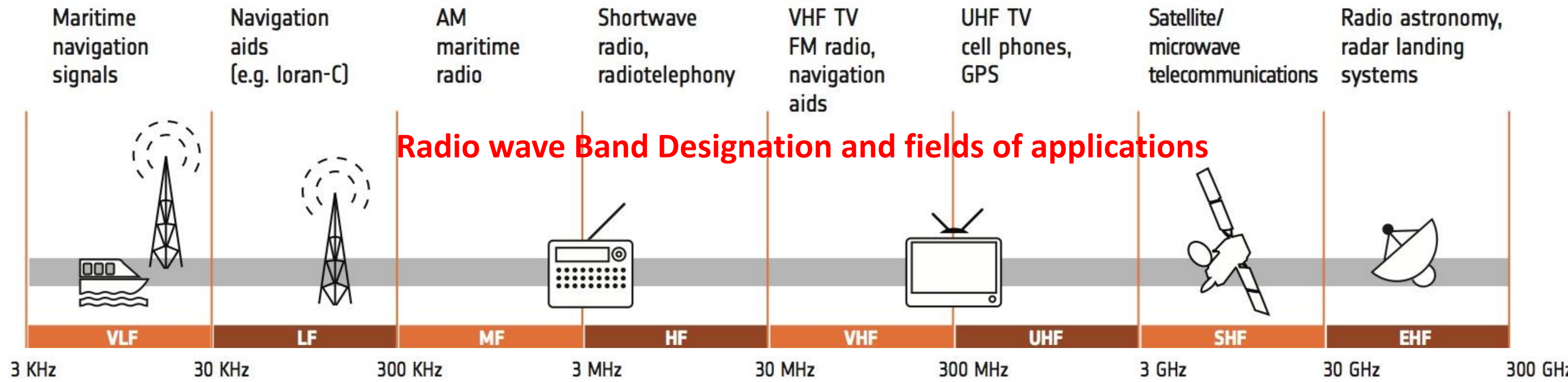




EVOLUTION OF WIRELESS APPLICATIONS SINCE THE TRANSATLANTIC RADIO TELEGRAPH BY GUGLIELMO MARCONI (1874-1937)

April 25: Birthday of G. Marconi



Current Research @ ECE

- Wireless health sensors
- Wireless wildlife monitoring sensors
- Wireless sensors for intrusion detection
- Massive MIMO Platform with enhanced Capacity

Radio wave propagation has progressed dramatically ever since the early 1900s.

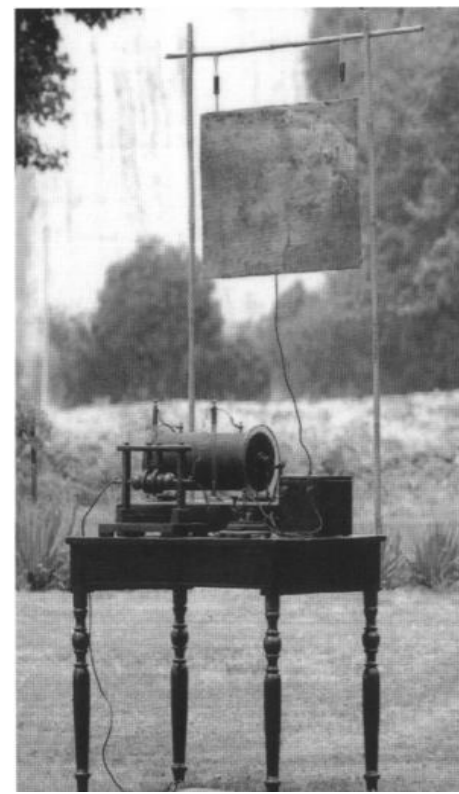
- Radio telegraphy (early 1900s)
- Broadcast radio (~1920s)
- Military communication (~1930s)
- RADAR (~World war II)
- Broadcast Television (~1940s)
- Satellite communication (~1960s)
- Radio imaging (MRI) (~1970s)
- Mobile communication (1980s)
- Mobile Internet (2000)
- Internet of Things

ECE Department in IISc was established in 1945 and has been spearheading research in many of the above areas.

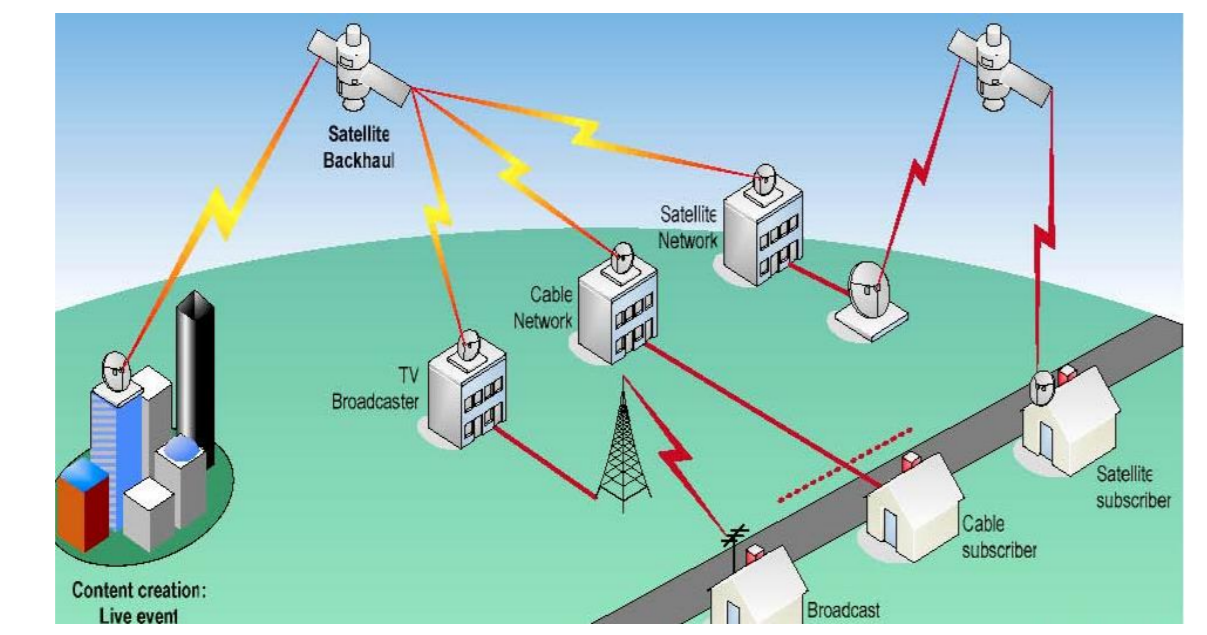
Current research in the Department includes wireless sensor networks, internet of things (IOT), massive multiple input multiple output (MIMO) communication systems, and the physical devices, circuits and systems for these applications.

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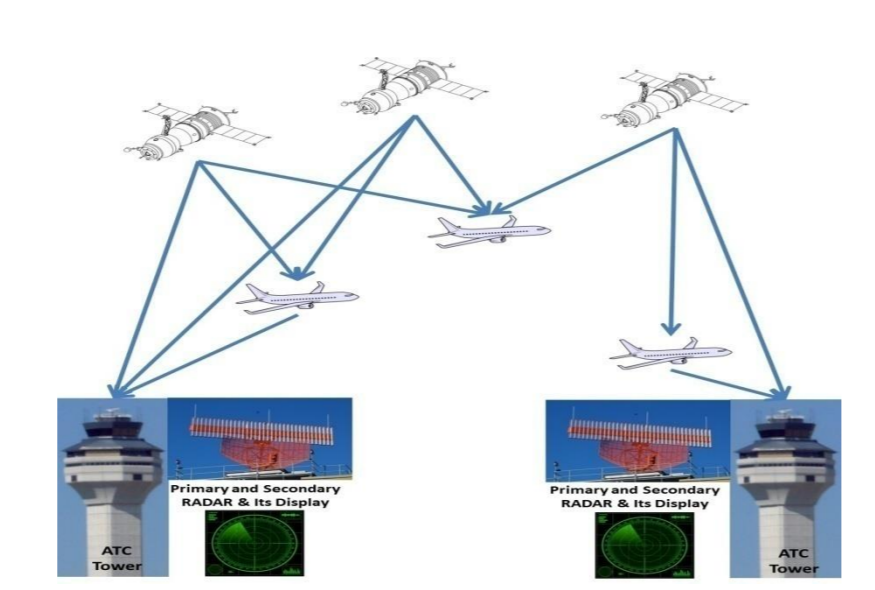
Web: <http://ece.iisc.ernet.in>



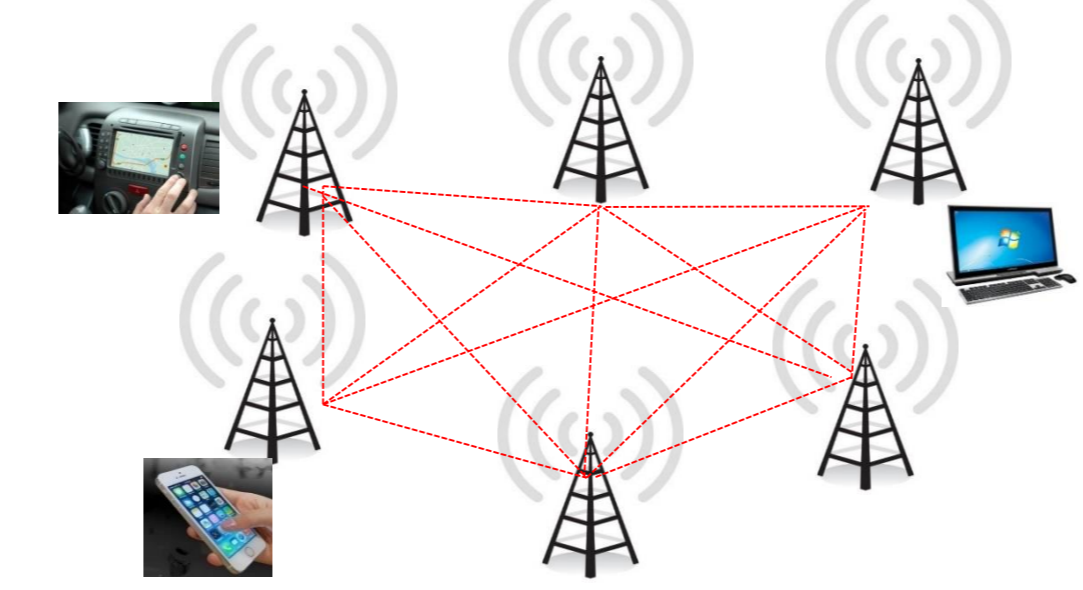
Marconi's Air gap Transmitter (shown left) led to the first commercial wireless communication



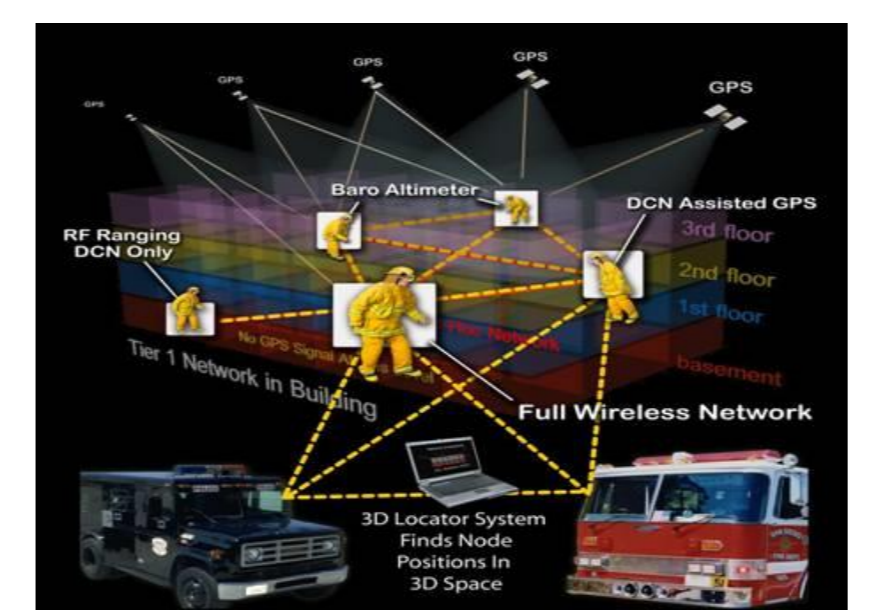
Media Broadcast Applications



Air Traffic Monitoring



Wireless Cellular Communication



Indoor Positioning