



Global Navigation Satellite System (GNSS) Applications

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GNSS Applications - 1

- Surveying, Mapping and Geodesy
- Transportation
 - Car Navigation, ITS, ADAS, V2X
 - Railway Network
 - Marine : AIS, VMS
 - Aviation : GBAS
 - UAV
- Legal and Law Enforcement
 - Fishing Zone, Crime Prevention
- Taxation / Insurance
 - Taxation based on location or distance traveled
- Vehicle Accidents / Emergency Services
 - eCall/ ERA-GLONASS / E-911





GNSS Applications - 2

- Agriculture
 - Precise farming, Auto-Driving of Tractors
- Personal Navigation
- Location Based Applications
 - Services, Entertainment, Advertisement, Gaming, Marketing
- Warning during Disasters
- Geo-Fencing / Geo-Securities
- Robotics
 - Navigation, Actions based on Location
- Scientific Applications
- Space Weather : Scintillation, Radio Occultation, Plasma Bubble





GNSS Applications - 3

Telecommunication

- Synchronize cell towers, microsecond order for CDMA
- Network Time Protocol , millisecond order
- Power Grid
 - Phase Synchronization between grids is required for higher efficiency and avoid power failures
- Time Stamping of
 - Financial and Banking Transactions
 - Legal, Clerical, Shipping Documents
- Scientific Timing Applications
 - Time stamping of events
 - e. g. Global VLBI Observation, earthquake occurrences, arrival of neutrino in particle physics