

# Next Generation Global Navigation Satellite Systems

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## Key words:

## SUMMARY

The surveying and mapping industry has been revolutionised by the use of Global Navigation Satellite Systems (GNSS) involving satellites, ground reference station infrastructure and user equipment to determine positions around the world. The Global Positioning System (GPS) from the USA is the best-known, currently fully operational system. Russia also runs its own GNSS called GLONASS. Fuelling growth in the coming decade will be next generation GNSS that are currently being developed. The USA is modernizing GPS, Russia is revitalising GLONASS and Europe is moving ahead with its own Galileo system. This presentation looks at some of the implications of these improvements for the service providers of continuously operating reference stations (CORS), as well as for survey users. For example, the EU's Galileo system is much more open to civilian and commercial involvement and allows for regional and local augmentation to the core system. This presentation addresses issues such as; how will current CORS infrastructure be able to cope providing differential positioning services to users tracking a combination of GPS, Galileo and perhaps GLONASS signals? What is the benefit of the modernized GPS L2C signal? Will mixed GPS/Galileo RTK services be possible?

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