## Operation "TOMODACHI" and more.....

# Thank you for your all of support!



Tsunami flooding around the Sendai Airport, from Wikipedia

### Acceleration of R&D for GNSS Utilization and Technology

Architecture Plans for realization of QZSS by National Budget

"3 QZSS + 4 GEO" or "4 QZSS + 3 GEO" or "5 QZSS + 2 GEO" or · · ·

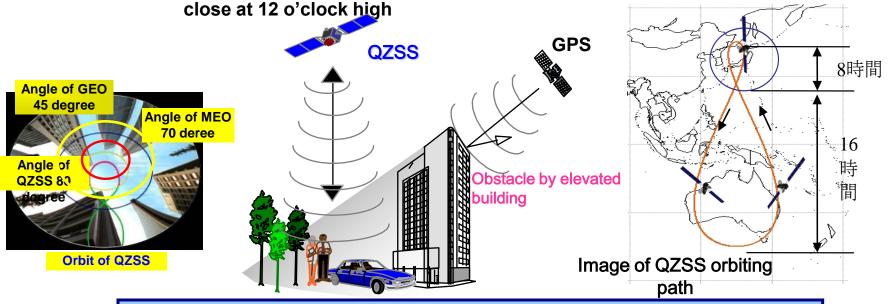
**Including SAR Services, PRS and Short Messaging Services** 

Signals for GPS Complement and Augmentation data by GEONET

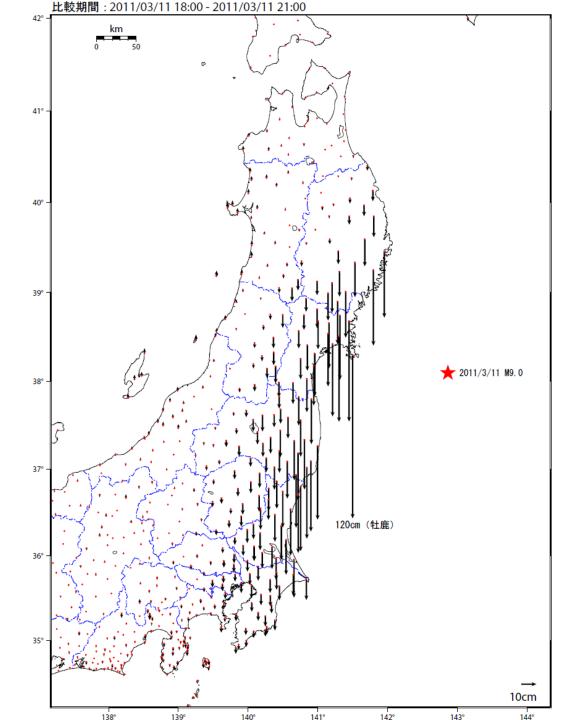
Governmental Body for QZSS Operation and Service Management

**Concept of QZSS** 

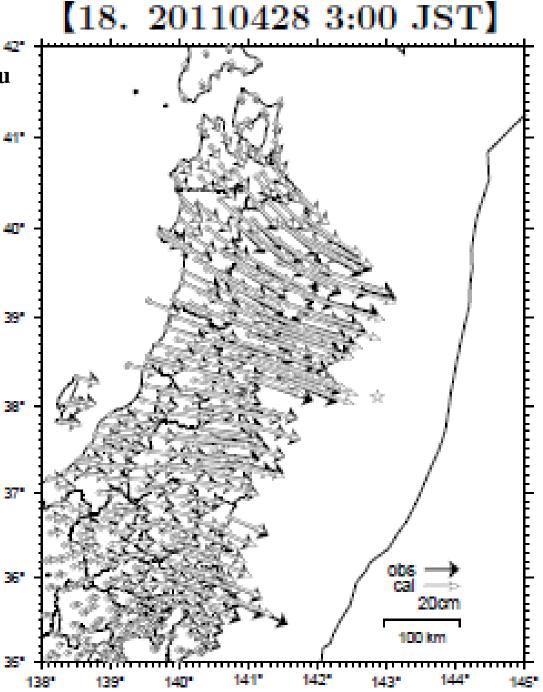
Realization of high-precision positioning services free of multi-pass effects at urban cannons etc to cover entire national land with the constellation visibility

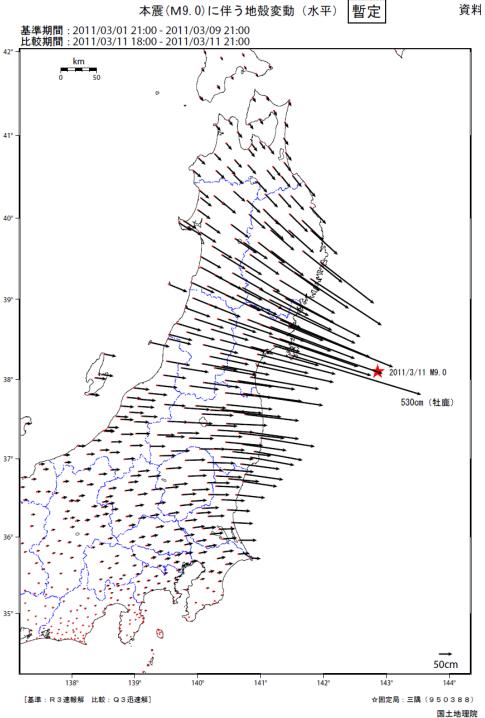


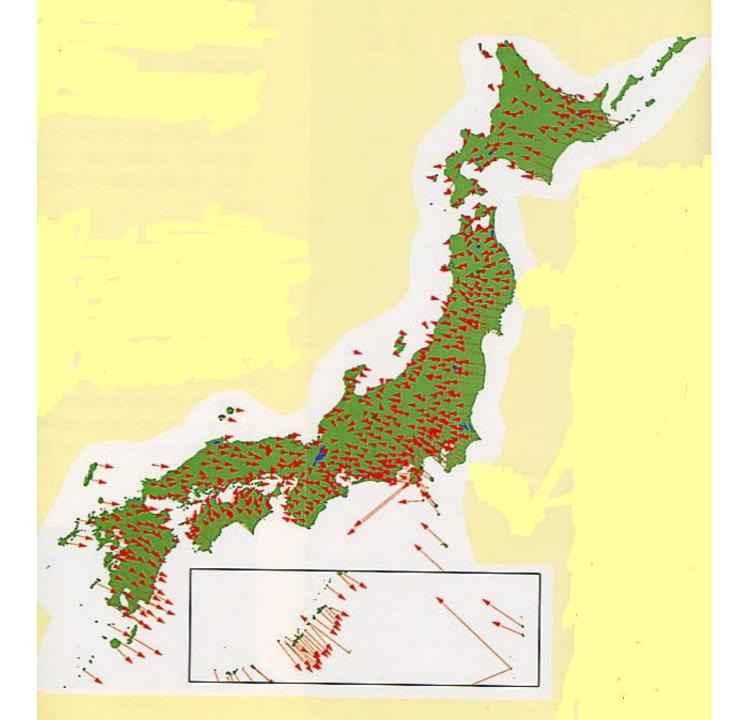
Major feature is the provision of high precision PNT in entire Japan

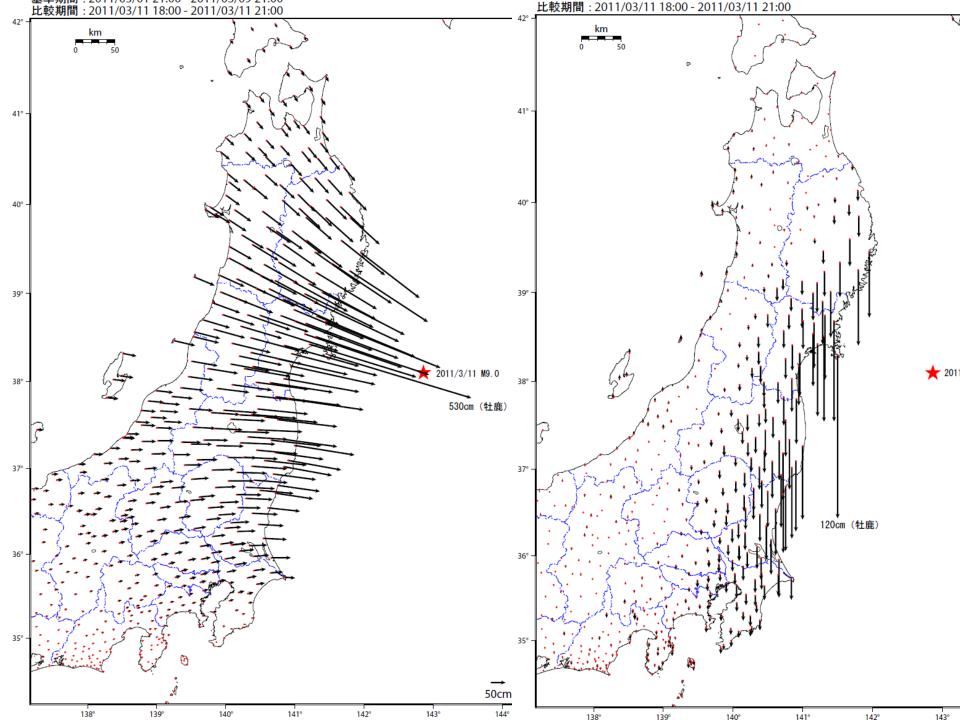


The 2011 off the Pacific coast of Tohoku
Earthquake Observed and calculated
horizontal replacements after the
mainshock 2

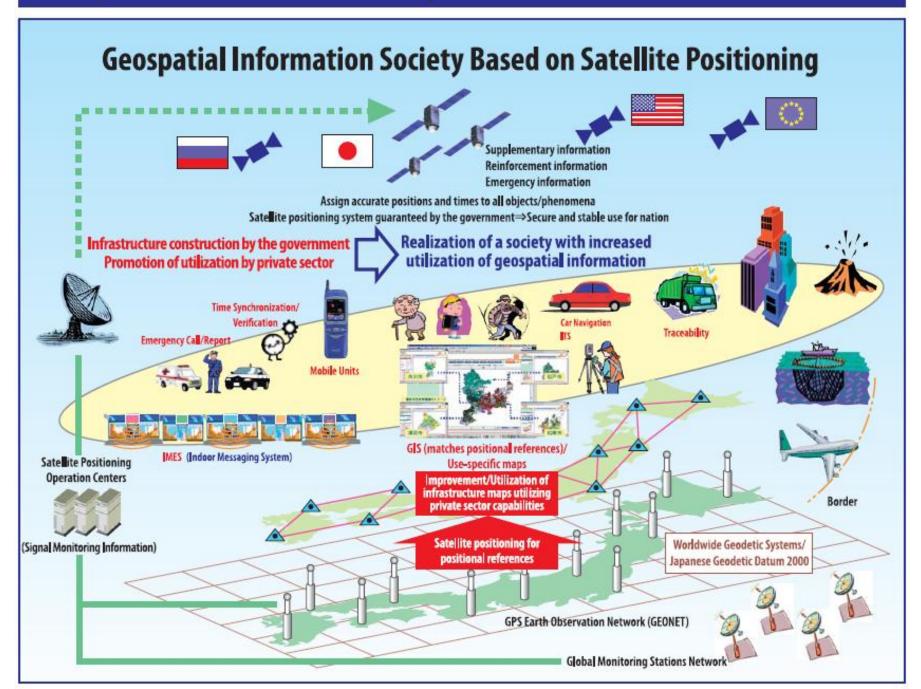








Society with Increased Utilization of Geospatial Information



### My Speech at the PNT Advisory, 2011.6

#### Ladies and Gentlemen

First of all, I would like to express my heartfelt gratitude to the international community for abundant help and support extended to Japan following the great natural disasters on March 11, 2011, just after a decade since 9.11.

Especially, I have no word to express my appreciation of the U.S. assistance named "TOMODACHI(Friendship) Operations" provided by DoD forces, other U.S. public and private sectors, which included not only human and material contributions, but also advisory services relating to the accidents at the affected nuclear power plant. I should not forget to make a comment on the human and moral effects of the TOMODACHI Operations. These aspects of the U.S. action impressed the Japanese people deeply and reminded them of what "True Alliance" between the two nations mean. I would, therefore, extend my special appreciation to the person, who was kind to use the word "TOMODACHI Operations".

The March 11 disaster has certainly accelerated proper recognition of QZSS implementation in Japan. At last, the Japanese people have come to recognize the necessity to expedite the implementation of "Space-based National Geo-spatial Data Infrastructure" and the importance of effective utilization of GNSS. The Secretariat of Space Strategy Headquarters is in hurry to work out the basic architecture plans for realization of QZSS. I believe that the full-fledged QZSS may include SAR (Search and Rescue) services and PRS (Public Regulated Services).

The magnitude of the March 11 earthquake has caused disturbances of the earth's cluster deep underneath the Japanese Islands.

Reportedly, the cluster has slid 5.3m (max.) to the eastern side.

All of sudden-slides to the east caused after several hundreds of years of bit-by-bit movements toward the west. GPS has enabled us to measure the crustal movements precisely and in real time. The GPS-based Frame of Reference Network implemented by GSI since the late half of 1980 is working properly.

The semi-dynamic correction activities have already been started for the restoration and reconstruction of the disaster affected communities. I want to say "Hail to GPS! its gold standard in the world"

I am pleased to report to you that the results of demonstration for QZSS utilization have been successful. A number of applications might be expected to be feasible, including ICT precision farming, IT robotic construction machine control, SAR, precise TSUNAMI monitoring, effective personal navigation in urban cannons and other applications.

Japan GPS Council is looking forward to continuing its efforts for the advancement of the GNSS utilization policy in Japan.

Thank you very much for your attention.