Information on IRNSS and GAGAN Projects (India)

Dr. Suresh V. Kibe Programme Director, SATNAV ISRO HQ, Antariksh Bhavan New BEL Road Bangalore - 560 094, India

1. By the time the GAGAN Final Operational Phase (FOP) is implemented (sometime in the 2nd half of 2010) and the IRNSS Timing Centre are established (also by 2010-11), India will have a large number of cesiums and two hydrogen masers available.

2. The IRNSS Timing Centre has set itself a goal to be within 20 ns (1 sigma) at any time with International Atomic Time (TAI).

3. The IRNWT (IRNSS Network Time) will be generated at the IRNSS Timing Centre located at the ISRO Tracking Centre, Bangalore. At that facility, it is proposed to have two hydrogen masers and two cesium clocks. The rest of the clocks (more than 60 in number) would be linked with the Timing Centre at Bangalore to generate the IRNSS Network Time (IRNWT).

4. Whether the IRNWT is to be treated as a separate UTC(k) is yet to be decided. At this point in time, it is too premature to even consider that the Indian Standard Time will be generated by ISRO. Hence, the IST will continue to be generated by the NPL of India till such time that a joint decisions taken and communicated to the BIPM.

5. It is also not decided whether the ISRO clocks and facilities would be converted into a Metrology Centre.