

The background of the slide is a collage of space-related images. It includes a satellite with purple solar panels, a rocket launch, a satellite dish, a satellite in orbit, the Earth with a rocket and satellite, and a view of the Earth from space. The text is centered on a white, curved shape that overlaps the background.

Overview of the Timing system planned for IRNSS

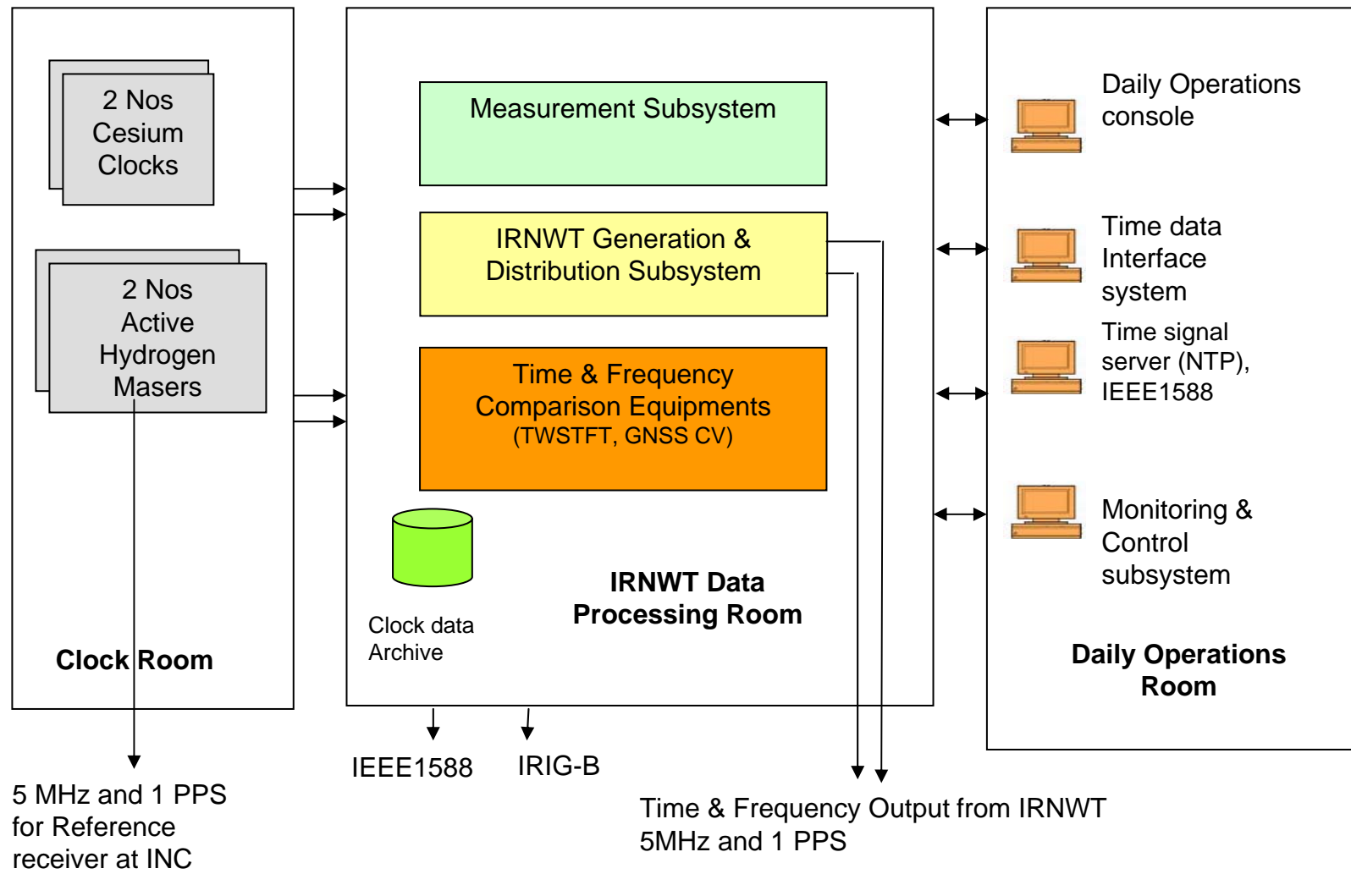
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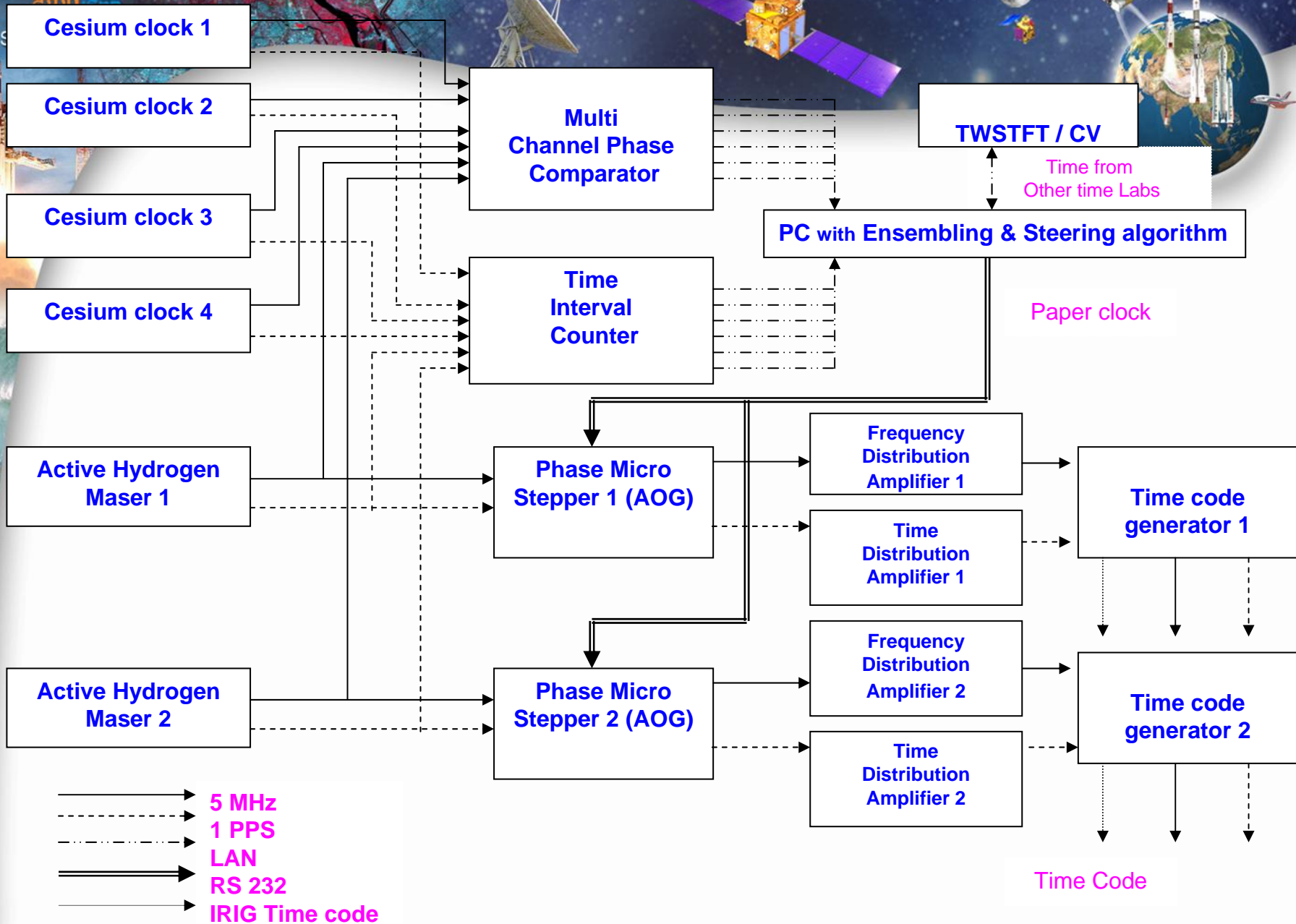
IRNSS Timing System

- ✚ IRNSS, being an independent constellation, has its own timing system – IRNSS Network Timing - IRNWT.
- ✚ IRNWT is the Reference for all types of corrections being computed for each of the spacecraft.
- ✚ The IRNSS Time is derived from an ensemble average of atomic clocks which is a combination of cesium clocks and Active Hydrogen Masers.

IRNSS Timing System



Concept of Time Generation for IRNSS



IRNSS Timing System

	Performance Parameters	Measurement value
1	Frequency Stability, per day	$5.0 * 10^{-15}$ ADEV
2	Frequency Offset, per day	$5.5 * 10^{-14}$, 2σ
3	Uncertainty in TAI-IRNWT	Less than 20 ns, 2σ
4	Uncertainty in IRNWT without steering to TAI, for 10 days	Less than 20 ns, 2σ
5	IRNSS Timescale is referenced to a standard time scale, with corrections to convert from satellite to system time scale, using the standard coefficients.	



Indian Space Research Organisation



THANK YOU