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

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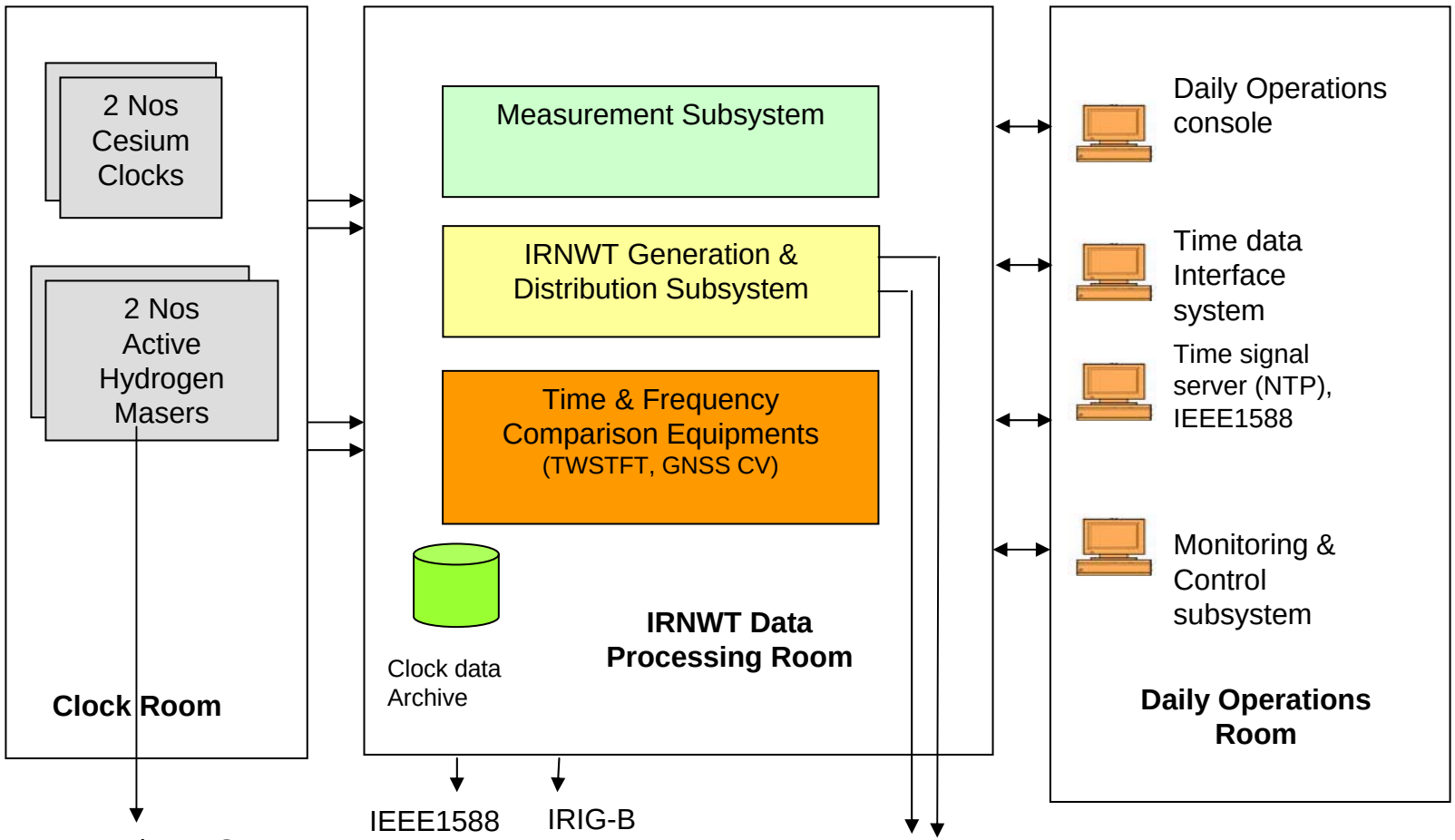
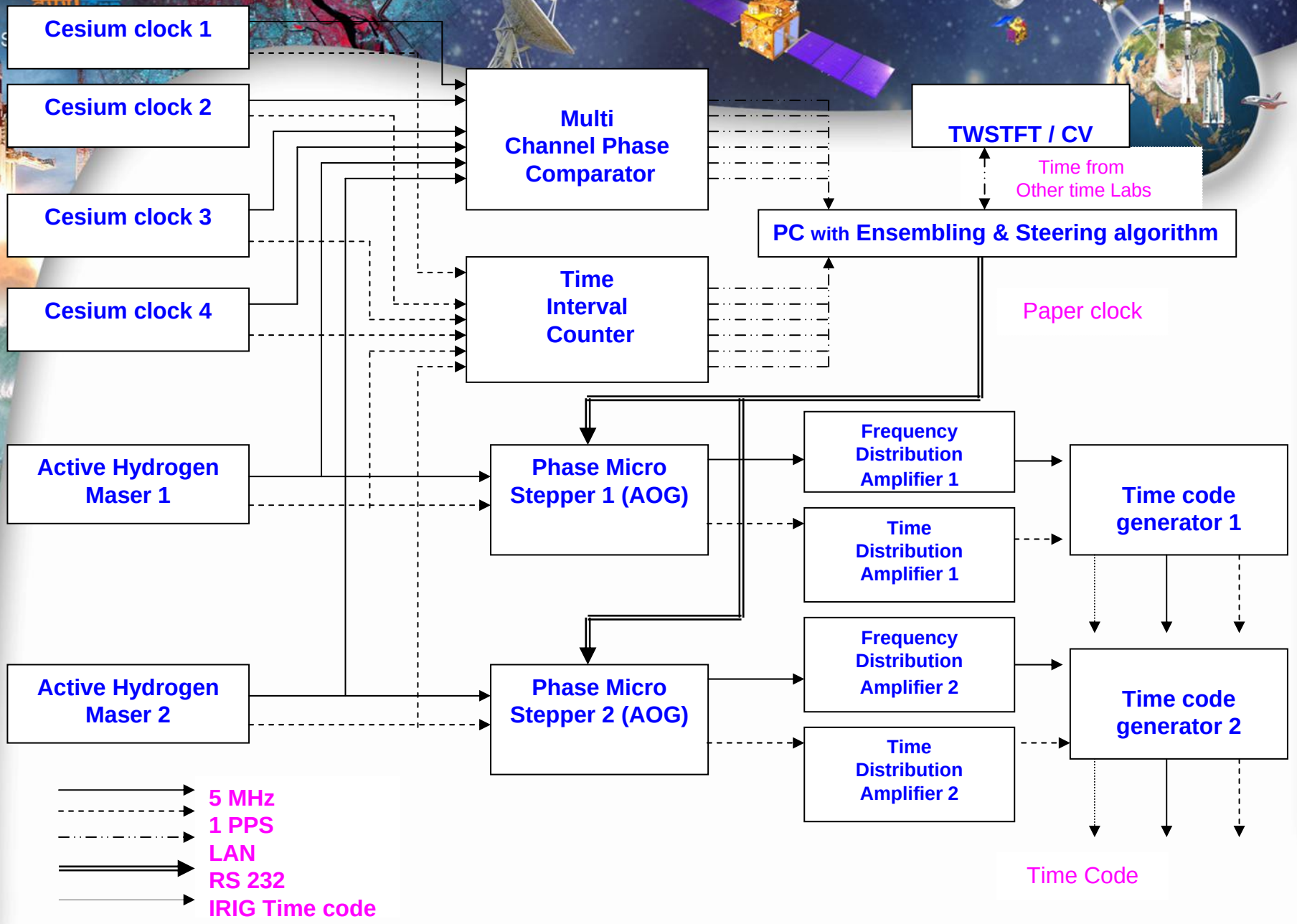


Concept of Time Generation for IRNSS



IRNSS Timing System

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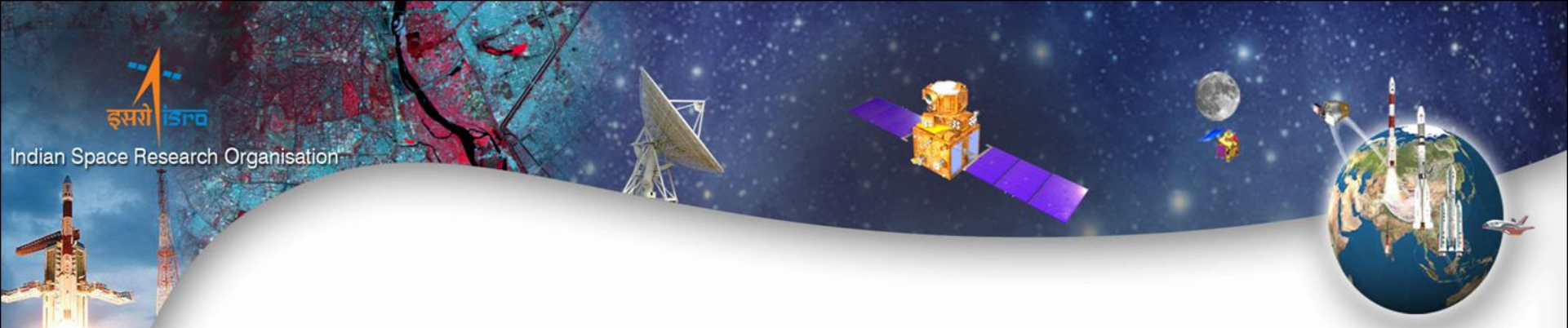
	Performance Parameters	Measurement value
1	Frequency Stability, per day	$5.0 * 10^{-15}$ ADEV
2	Frequency Offset, per day	$5.5 * 10^{-14}$, 2 σ
3	Uncertainity in |TAI-IRNWT|	Less than 20 ns , 2 σ
4	Uncertainity in IRNWT without steering to TAI, for 10 days	Less than 20 ns , 2 σ
5	IRNSS Timescale is referenced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



THANK YOU