



# **SPECIAL COLLOQUIUM ON THE FUTURE OF THE UTC TIME SCALE**

*28-30 May 2003*

*Istituto Elettrotecnico Nazionale "Galileo Ferraris"*

*Conference Hall*

*Strada delle Cacce, 91*

*Torino, (Italy)*



# OPTIONS

Objective: Achieve a Continuous Time Scale for ??

1. Maintain the Status Quo

Use UTC as currently defined

Increasing number of Leaps Second

2. Modify UTC Standard by transition to International Time (TI) at point in time

Value of DUT1

3. A. Transition to TAI for Precision Use (UTC – TAI = 32 seconds)

Align International Atomic Time (TAI) with current UTC

Maintain UTC for transition period

B. Low precision Time Scale ( UT1 like scale related to Solar time)



## SUMMARY CONCLUSION

### Objectives :

- To address the future of the Leap Second and related issues.
- To draft a recommendation on the next steps on this issue to WP7A of the ITU-R.

### Conclusions:

- There was no overwhelming consensus on a whether the status quo should be maintained or an alternative should be pursued.
- However, the preferred characteristics of a potential alternative emerged (see below).
- This draft alternate proposal should be passed on to WP7A for detailed development of an Opinion to be transmitted to the appropriate international organizations.
- Advances in technology in communications, navigation and other fields would be enhanced in their interoperability by the adoption of a single, internationally recognized time scale for use in civil, engineering, and scientific applications.

### Draft Alternate Proposal :

- Evolve from the current UTC Standard by transition to *Temps International* (TI) (2022 – 50<sup>TH</sup> anniversary of the UTC time scale). The date suggested is influenced by the lifetimes of existing systems that would be expensive to change.
- TI should be a continuous atomic time scale, without Leap Seconds, that is synchronized with UTC at the time of transition.
- Responsibility for disseminating UT1 information should remain solely with IERS.