Leap second to be added

29 June 2012

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A leap second will be introduced on 30 June 2012 following a decision made by the International Earth Rotation and Reference Systems Service (IERS) earlier this year. This could potentially be one of the last ever leap seconds added, as a decision may be made in the next few years to abolish the practice.

Leap seconds are added to Co-ordinated Universal Time (UTC) to keep the time scale from atomic clocks within one second of that determined by the rotation of the Earth. The time scale produced by atomic clocks is much more stable and reliable than that based on the Earth's rotation, and without leap second adjustments the two would diverge by ever increasing amounts.

There is ongoing debate over whether or not to abolish leap seconds and allow atomic time to gradually drift away from solar time. For now, a decision has been deferred until 2015, but if agreement is reached then to abolish the leap second, the second added on 30 June 2012 could be one of the last.

Some countries have proposed that leap seconds should be abolished because of the difficulties they cause for systems reliant on precise timing, and the time and effort needed to programme them manually into equipment, with the resulting risk of human error. They also argue that the need for predictable timekeeping outweighs that for a link between civil timekeeping and the Earth's rotation.

However, other countries argue that the current leap second system works adequately for the majority of users and the international community needs to be absolutely sure about the long term consequences before making any potentially irreversible changes to it.

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