

June 30th To Have 24hours And One Second

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KUALA LUMPUR, June 29 (Bernama) -- Tomorrow, the daily hours will gain an additional second worldwide, following a rare phenomenon called 'leap second', said National Space Agency (Angkasa) science officer, Mohd Zamri Shah Mastor.

He said this would mean tomorrow June 30, would be 24 hours and one second long.

Mohd Zamri pointed out that the one second bonus was due to the slower rate of the earth's rotation on its axis.

He said the earth's rate of rotation was governed by polar motion (tidal friction, core-mantle interaction) and the weather.

"These factors can cause the earth's rotation to either slow down or speed up thus the phenomenon 'leap second' is something uncertain, and depends on the rotation of the earth," he told Bernama, here, today.

Mohd Zamri said the one second bonus would be obtained at the end of the day tomorrow.

In this connection, he said the International Earth Rotation and Reference Systems (IERS) based in Paris and which serves as a watchdog on the earth's rotation would streamline the coordinated universal time (UTC) in proportion to the actual rotation of the earth.

"Although the increase is just one second and is overlooked by many, the addition creates an impact on the high-precision timing oriented industries," he said.

So far, according to Zamri, UTC had been increased by one second 25 times since 1972 with the last on July 1, 2012.

Meanwhile, senior principal metrologist at the National Metrology Laboratory, Sirim Berhad, Dr Mohd Nasir Zainal Abidin when asked whether time, among others, on handphones needed to be manually adjusted, he said all electronic devices would be synchronized automatically with the network time protocol servers.

"The same goes for interconnected or networked computers, and issues on the insertion of the extra leap second is only critical on servers," he said.

Asked what might happen if a server fails to function properly tomorrow, he explained what had occurred with the same phenomenon last June 2012 on a weekend.

"Even so, globally, about 10 per cent of the network time protocol servers got it wrong. Most servers were fixed within an hour, but some took a day," he said adding that in

Australia, the extra second affected flight check-ins and hit popular websites.

Thus, for "normal" business day tomorrow, he advised that precaution be taken on online businesses, network systems, internet service providers, digital time notary services and applications such as MySQL, Hadoop, Cassandra.

"Some services are taking steps to suspend or cease operation a few hours before and after operation. It is hard to state this accurately because not much was reported.

"However, the problem due to the slowing down of the earth's rotation and leap second insertion to the UTC must not be ignored, since there are tremendous amount of business transactions that can take place in a second. Furthermore, transactions are not confined to a single time zone," he added.

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